Croonian Lectures

ON THE

EVOLUTION AND DISSOLUTION OF THE NERVOUS SYSTEM.

Delivered at the Royal College of Physicians,

BY J. HUGHLINGS JACKSON, M.D., F.R.S.,

FELL. ROY. COLL. PHYS.,
PHYSICIAN TO THE LONDON HOSPITAL.

LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—So far I have, for the most part, ignored the distinction between mental states and nervous states. I now pay particular regard to it. Here it is well to remark that, as Spencer says, "the doctrine of evolution, under its purely scientific form, does not involve materialism, though its opponents persistently represent it as doing so." He speaks of the materialistic hypothesis as being "utterly futile." To describe Spencer, Huxley, and Tyndall as materialists is as absurd as speaking of Sir Joseph Lister as an opponent of antiseptic surgery would be. Spencer frequently insists on the absolute difference between states of consciousness and nervous states. Here is a most explicit declaration. After a consideration of increasing complication of mental states and nervous states, he writes:[1] "Of course I do not mean that material actions thus become mental actions. As was said in Sections 41–51, 62, 73—'No effort enables us to assimilate' mind and motion; I am merely showing a *parallelism*" (italic in original) "between a certain physical evolution and the correlative psychical evolution." If anyone wish to be thoroughly materialistic as to what is material—the nervous system,—let him not be materialistic at all as to mind, which is not material at all. A man has both a mind and a body. On the principle of doing one thing at a time, I shall in this lecture first speak of the body only.

A man, physically regarded, is a sensori-motor mechanism. I particularly wish to insist that the highest centres—physical basis of mind or consciousness—have this kind of constitution: that they represent innumerable different impressions and movements of all parts of the body, although very indirectly, as certainly as that the lumbar enlargement represents comparatively few of a limited region of the body directly. It may be rejoined that the highest centres are "for mind." Admitting this in the sense that they form the physical basis of mind, I assert that they are "for body" too. If the doctrine of evolution be true, all nervous centres must be of sensori-motor constitution. *A priori*, it seems reasonable to suppose that, if the highest centres have the same composition as the lower, being, like the lower, made up of cells and fibres, they have also the same constitution. It would be marvellous if at a certain level, whether we call it one of evolution or not, there were a sudden change into centres of a different *kind* of constitution. Is it not enough difference that the highest centres of one nervous system are greatly more complicated than the lower? Some years ago I asked the questions: "Of what 'substance' can the organ of mind be composed, unless of processes representing movements and impressions? And how can the convolutions differ from the inferior centres, except as parts representing more intricate coördinations of impressions and movements in time and space than they do? Are we to believe that the hemisphere is built on a plan fundamentally different from that of the motor [and sensory] tract?"[2] It is accepted, since the researches of Hitzig and Ferrier, that convolutions in the mid-region of the brain (which I call middle motor centres) do represent movements. It may, not without reason, be asked: Why should not also the more anterior parts of the brain, frontal lobes (which I call highest motor centres), represent movements? Recently, indeed, Ferrier and Gerald Yeo[3] have concluded, from experiments on monkeys, that the frontal lobes represent some movements, and significantly these are lateral movements of the eyes and head—the most representative (in another sense of the word represent) of all movements. This is all the more significant, since many epileptic paroxysms (the discharge beginning in some part of the highest centres) begin by turning of the eyes and head to one side; and the more significant still when we bear in mind Beevor's observation that in many cases of post-epileptic coma there is very transitory lateral deviation of the eyes from the side to which they turned in the prior paroxysm. Whilst, however, Ferrier agrees with me in thinking that the whole anterior part of the brain is motor, and that, to use his words, "mental operations, in the last analysis, must be merely the subjective side of sensory and motor substrata,"[4] as I have long earnestly contended, he does not agree with me in thinking there is a division into middle and highest cerebral motor centres; and he thinks that what I call the highest motor centres represent only movements of the eyes and head, and not movements of all parts of the body, as I do.

In further exposition, I shall speak for the most part of movements only, for I believe that no one has ever denied that convolutions represent impressions (or, as is sometimes inaccurately said, sensations, or ideas made up of combinations of sensations). If the highest centres do not represent movements, it seems to me that the phenomena of an ordinary epileptic fit are unintelligible. Moreover, I think that the highest centres represent impressions and movements of *all* parts of the body. Neglecting impressions, this position seems to me to be supported by very different kinds of evidence.

1. I postulate that in an epileptic seizure, since consciousness is lost at or soon after its onset, the discharge begins in some part of the highest centres, the physical basis of consciousness. I do not say that in all epileptic seizures it begins in some part of the highest motor centres; these may no doubt be put in secondary activity by discharges beginning in parts of the highest sensory centres. I think it quite certain that epileptic attacks are not, and that epileptiform seizures are, owing to discharges beginning in parts of the mid-cortical region (middle motor centres). A consideration of the facts of epileptic paroxysms leads, I submit, to the conclusion that the highest centres represent, through the intermediation of the middle and lowest centres—that is, re-re-represent—all parts of the organism in most intricate combinations. (*a*) We see in a severe epileptic fit that all the skeletal muscles are put in vigorous activity—simultaneous development of innumerable different movements of all parts of the body. (*b*) If we take a slighter case, one of petit mal, we see that the effects of the central discharges are very widely, if not universally, distributed over the body; there are in such cases effects so various as spasm of ocular and hand muscles, pallor of the face, flow of saliva, perspiration, changes in the circulation (sometimes stopping of the heart's action, as Moxon has insisted), and arrest of respiration; there is often in or just after these slight fits a discharge of fæces and urine. The existence in some cases of petit mal of the voluminous mental state, so-called intellectual aura, spoken of in the last lecture (first depth of dissolution effected by an epileptic discharge), guarantees, so to speak, that the cruder effects just spoken of are owing to abnormal activity of the highest centres. The elaborate mental states mentioned, which I suppose no one will hesitate to ascribe to activity of "the organ of mind" (highest centre), never, so far as I have observed, occur in or after epileptiform seizures (discharges of middle motor centres). (*c*) Then, if we take only the "warnings" of epilepsy, or rather of many different epilepsies, which "warnings" occur from, or attend, the beginning of the central discharge, we find them exceedingly various; there is giddiness, implying spasm of ocular muscles or of some of those of the head; there are "crude sensations" of smell, sight, hearing, and taste. Besides these we find palpitation, a peculiar sensation referred to the epigastrium, and widely referred sensations of tingling, shuddering, and shivering. (*d*) Another kind of evidence from cases of epilepsy is that, when a severe fit is over, there is some universal paralysis; at least, I contended so in my last lecture. Surely, the several kinds of evidence point to the conclusion that the highest centres—the physical basis of consciousness—represent the whole organism.

[1] Psychology, vol. i., p. 463. [2] St. Andrews Med. Grad. Reports, 1870.
[3] Proceedings of the Royal Society, Jan. 24th, 1884.
[4] Functions of the Brain.

2. There is a totally different kind of evidence which points to the same conclusion. Some medical writers speak of centres of volition, of ideational centres, of centres for reasoning (?), and of emotional centres; all four, of course, being cerebral centres. Whilst not believing in the least that there is a separate centre for each of these four "faculties," I will speak, for simplicity of exposition, as if there were. I now proceed to analyse, very briefly, not the mental states themselves, but their physical bases—nervous arrangements, which are in each, I submit, sensori-motor, triply indirectly representative of impressions and movements of parts of the body. I need, however, say nothing of the sensory element, for I suppose it will not be denied. (*a*) The physical basis of volition consists of nervous arrangements, representing movements; the particular volition of the movement is, on the physical side, the survival of the fittest movement of the whole organism during activities of the centre for volition. The "centre of volition" is a centre representative of movements, particularly of movements of the arms, legs, face, and eyes. (*b*) *Ideational centres, or centres of memory.* Limiting myself to the simple cases of tactual and visual ideas, or images, the assertion is that the ideational centre of necessity represents movements of the hands and eyes. That it represents manual and retinal impressions is, of course, certain; but that it also represents movements needs insisting on. No one ever touched anything (had a vivid tactual image) without moving his fingers; and no one ever saw anything (had a vivid visual image) without moving his eyes; therefore, in the anatomical substrata of what are called "ideas of objects," or better, "faint images," there will be represented movements of the hands and of eyes. (*c*) I confess that I never heard anyone speak of a centre for reasoning; but, if there were warrant for believing in the existence of separate centres for the other faculties, I should think there ought to be greater warrant for believing in a centre for reasoning. Words serve us during reasoning; they are necessarily required in all abstract thought; this being so, the centre for words or for reasoning would consist especially of nervous arrangements representing highly complex and special articulatory movements.[5] (*d*) *The emotional centre.* In strong emotional manifestations nearly all parts of the body are involved—not only the limbs, the facial, vocal, and respiratory muscles, but also many internal organs. The emotional centre will then represent an exceedingly wide range of movements. During fright there are pallor, palpitation, and hurried respiration; occasionally there is a passage of fæces; there is dry mouth; there is increased sweat with coldness of skin.[6] The popular explanation would be that there is an emotional centre which is not representative of the parts concerned in the manifestations, but that its activity produces the manifestations by acting on lower centres, which alone represent those parts. The more realistic view, I submit, is that the emotional centre itself represents, although very indirectly, the parts of the body concerned in different emotional manifestations, and that an emotion arises during the central activities which, through subagency of the middle and lowest centres, produce the manifestations.

Now, not believing in the existence of the four separate faculties, but holding that will, memory, reason, and emotion are simply artificially distinguished aspects of one thing, a state of consciousness—I say that, instead of four centres, there are highest centres; and that, during activity of these centres, will, memory, reason, and emotion are simultaneously displayed; or, in strictly equivalent words, that there arises a state of consciousness. If so, then, putting together the "four centres," and their motor representations, we have, altogether, obtained highest centres representing (1) movements, especially of the arms, legs, and face; (2) movements of the hands and eyes; (3) articulatory movements; and (4) movements of many parts of the body, animal and organic. The conclusion from this evidence, very imperfectly and incompletely stated I admit, is that the highest centres represent, at any rate, very many, and certainly most different, parts of the body.

The two utterly different kinds of evidence converge to the same conclusion. Taking them together, we see that there is no incongruity in asserting that both epilepsy and insanity are diseases of the highest centres. In health, will, memory, reason, and emotion—or, in other words, a state of consciousness—arise during slight sequent activities of sensori-motor nervous arrangements of the highest centres, representing all parts of the body. An epileptic seizure is owing to a sudden and excessive discharge of very many of these sensori-motor nervous arrangements nearly simultaneously. During such discharges consciousness ceases, and from then—taking into account secondary downward discharges of middle and tertiary discharges of lowest centres—there results that contention of innumerable movements of all parts of the body, which we call universal convulsion. Taking a case of insanity which, like epilepsy, is a disease of the highest centres, the averment is that the negative element, defect of consciousness, implies loss of, or loss of function of, for illustration, the topmost layer of the highest centres. This, on the hypothesis that the highest centres are sensori-motor, is causative of some trifling widely distributed paralysis. The positive element (illusions, &c.) is mentation or consciousness going on during activity of the lower level remaining, second layer. This, the highest mentation then possible, occurs during activities, stronger than normal, of sensori-motor nervous arrangements, but activities incomparably less strong than those productive of convulsion. Were, in the case of insanity, the second layer, or part of it, to discharge suddenly and excessively, as occurs in an epileptic fit, even insane mentation would cease during the discharge, and convulsion would result from it. This is an old conclusion, as the following quotation shows. At that time I did not, not having the advantages of the researches of Hitzig and Ferrier, divide the brain into middle and highest centres. As the words now intercalated show, I did not then distinguish clearly the mental from the physical.

"Surely, the conclusion is irresistible that mental symptoms from disease of the hemisphere are [on the physical side] fundamentally like hemiplegia, chorea, and convulsions, however specially different. They must all be due to lack of, or to disorderly development of, sensori-motor processes."[7]

It may be objected that, during most mentation, there are no movements. It will be borne in mind that I said that the nervous arrangements of the four centres, together the highest centres, represent parts of the body triply indirectly. The middle and lowest centres are not only "reservoirs of energy," but also "resisting positions." All that is contended for is to take the case of visual ideation, and neglecting the sensory element, that there are slight excitations of nervous arrangements triply indirectly representing movements of the ocular muscles, but excitations not strong enough to overcome the resistance of the middle centres. When ideation rises into perception there is, physically, a stronger discharge of the same nervous arrangements of the highest centres, so that the middle and then the lowest centres are overcome. I speak of this subject again, after considering reflex actions in which the highest centres are engaged.

I now speak again of degrees of organisation, especially as to the highest centres, which are the least organised. I have pointed out that there is no difficulty in supposing that these centres may be the most complex, and, at the same time, the least organised. If the highest centres were already organised, there could be no new organisations, no new acquirements. I will now illustrate the process of dissolution with regard to degrees of organisation. It may be contended that alcohol, in a small quantity, "excites," although it is granted that, in a large quantity, it produces coma. It may be said that the boisterous conduct of a drunken man occurs because alcohol has goaded certain nervous arrangements of his highest centres into activity, and that it is not, as Anstie supposed, the result of permitted increased activity of a lower and more organised level of evolution consequent on exhaustion of the higher, the less organised. Let us take a case free from ambiguity—a case of simple fatigue. A very good example of what would be popularly called "increased activity" of the brain "from debility" is given in *Greater Britain*. "This

[5] It is not meant that a word, which is a psychical thing, is an activity of any nervous arrangements for highly special and complex articulatory movements, but that such nervous arrangements (or, rather, audito-articulatory nervous arrangements) are the physical bases or anatomical substrata of words. I believe that these articulatory movements are represented largely in Broca's region, but yet over again in the highest motor centres.

[6] I believe that the positive effects are owing indirectly to exhaustion of nerve-fibres effected by a prior sudden discharge, holding that there is a negative and a positive element in the physical condition for fright; for example, the palpitation may be owing indirectly to exhaustion of the inhibitory fibres of the vagus, the passage of fæces indirectly to exhaustion of the splanchnics; the two positive symptoms are owing to permitted over-activity of lower centres, consequent on removal of control.

[7] St. And. Med. Grad. Trans., 1870.

evening, after five sleepless nights, I felt most terribly the peculiar form of fatigue that we had experienced after six days and nights upon the plains." Observe, the writer calls his condition fatigue. "Again the brain seemed divided into two parts, thinking independently, and one side putting questions while the other answered them; but this time there was also a sort of half insanity, a not altogether disagreeable wandering of the brain, a replacing of an actual by an imagined ideal scene." Popularly, we say that the condition was caused by fatigue—five sleepless nights; but I submit that the more reasonable explanation is that fatigue caused only the negative physical state, answering to the negative part of the mental condition, the loss of the "actual scenes," and that the "ideal scenes" which "replaced" them occurred during activity of lower, more organised, nervous arrangements, uncontrolled by the exhausted highest. It seems to me that Anstie's principle applies clearly here. I may instance a more extreme case. Delirium sets in during starvation; surely it cannot be contended that from total withdrawal of food certain nervous arrangements attain greater activity? If they do, we have still to account for the negative part of the starved man's delirious condition. Does innutrition "cause" two diametrically opposite and yet co-existing states of the nervous system? Anstie's principle accounts for both.

The next pair of terms I consider are voluntary and automatic. The expression "most voluntary" is very objectionable. It is a compound of a psychological and of a physiological term. Instead of it, I suggest the expression "least automatic," which is rigidly equivalent to what is called "most voluntary." This is stated in effect by Herbert Spencer in the remark that the "cessation of automatic action and the dawn of volition are one and the same thing."[8] Volition arises during activity of the least automatic nervous arrangements; or, rather, a kind of mental action arises which is one of memory, reason, feeling, or will, according to the side of it we look at."[9] So now we say that the progress in evolution is from the most to the least automatic, and thus that the highest centres are the least automatic. It is not a mere question of words. The substituted expression does not imply an abrupt division into the voluntary and the automatic, but implies degrees from most to least automatic, and that a man, physically regarded, is an automaton, the highest parts of his nervous system (highest centres) being least automatic; the substituted term does not bring the will, a psychical state, into a purely physical sphere.

A perfect automaton is a thing that goes on by itself. There are degrees from those nervous arrangements, which almost go on by themselves to those which come into activity by the aid of other, lower, more organised, nervous arrangements. To say that nervous arrangements go on by themselves, means that they are well organised; and to say that nervous arrangements go on with difficulty, if at all, by themselves, is to say that they are little organised. Hence degrees from most to least automatic are, on another aspect, degrees of organisation from the most to the least. Repeating what has already been said in effect, if the highest centres were perfectly automatic, there would be no such thing as a "voluntary" operation; all being organised, there would be no possibility for correct adjustments in new circumstances; we should be ready adapted to particular external conditions, but no new adaptations to new conditions could occur. The becoming more perfectly organised, and the becoming more automatic,[10] are only different sides of one thing; a commonplace illustration is learning to write. There are degrees of automaticity from those operations inherited comparatively perfect, through, so to speak, the secondary automatic (writing, for an example) up to the activities of those least automatic nervous arrangements which are concerned during one's present thinkings and doings. We may see that there are degrees from most organised and most automatic nervous arrangements, up to nervous arrangements just began—nerve-stuff being, for the first time, travelled by nerve-currents.

To illustrate dissolution from this point of view would be essentially a repetition of former illustrations, given after speaking of degrees of organisation. I would observe here that, in using such an expression as *the* "automatic," we must bear in mind that what is very automatic to one man is not automatic to another. This is either a truth or a truism, as we apply it. When a patient is delirious, say during acute non-cerebral disease, and goes through, in pantomime, the manipulations of his trade, although these operations are exceedingly elaborate in themselves, they are not elaborate to him. They have become deeply automatic, and go on very much by themselves in health; in consequence, in spite of their elaborateness, the persistence of only such actions implies a deeper dissolution than the persistence in another patient of actions equally elaborate, which had not in him become automatic.

I pass over the two antithetical terms, "general" and "special," and also another pair, "complex" and "simple." We now come to the doctrine of reflex action. The term corresponding to "most organised" and "most automatic" is "most perfectly reflex"; that corresponding to "least organised" and "least automatic" is "least perfectly reflex."

Degrees of automatic action answer to degrees of independency of nervous arrangements, from those almost going on by themselves, and nearly independently of all others, to those put in action by others, most dependent on all others. Degrees of reflex action are degrees of nervous arrangements going on according to degrees of stimuli coming to them. No doubt the distinction is to a very great extent artificial; but it is a convenient one. In further remarks, I limit myself entirely to reflex actions in which the highest cerebral centres are necessarily engaged. Here we make a division of these: (1) complete and strong, those in which the highest centres are strongly engaged along with all lower centres; (2) incomplete and weak, those in which the highest centres are alone engaged, and are in but slight activity. Beginning with an artificially simplified case of complete and strong reflex action, I suppose that I am seeing a brick: this is sometimes called a "perception;" I prefer the expression, that I have a vivid image. So far we have spoken of a mental event; now for the correlative purely physical event, which is a reflex action occurring during, or rather effecting, a correspondence of the organism with the environment (the process is really double). What first happens is that there is a peripheral impression (upon the retina), impulses then pass through the lowest, through the middle, and up to the highest sensory centres. It should be particularly observed that there is passage from the most organised to the least organised centres; from the least modifiable to the most modifiable; there is a multiplication of energy-liberations upwards, and consequently strong excitation and wide irradiation in the highest sensory centres. So far we have only stated one half of the reflex action, have only reached the physical condition in the highest sensory centres correlative with the colour of the brick. It and all other objects have shape, and this as much requires to be accounted for as the colour. The shape of an object is the relation of its several positions one to another; our knowledge of this relation is by movements, in this case ocular movements (symbolising some movements of the hands).[11] By currents passing from the highest sensory centres, so to speak, "across" to the highest motor centres, and from these downwards, through middle and lowest motor centres, to muscular periphery, there is development of movements of the eyeballs; the process in this stage is from the least to the most organised, from the most modifiable to the least modifiable; there is a limitation of energy-liberations downwards, and thus from wide excitations in the highest centres there result movements limited to a part of the periphery. Here we have complete and strong reflex action, complete because all orders of centres, sensory and motor, are engaged; and strong, because the highest centres are in great activity, consequent on the multiplication of energy-liberations upwards.

This is a purely physical process. The vivid image, the mental state we have, arises during (not from) the physical condition in the two divisions of the highest centres, and is strongly and definitely "projected," because the lower centres are engaged; it *seems* part of the outer world. Next day we can think of the brick in its absence, have "an idea of it," or, as I prefer to say, have a faint image, where yesterday we had a vivid image. In this case the reflex action is incomplete and weak; the lowest and the middle

[8] Psych., vol. i., p. 497. [9] Spencer, vol. i., p. 495.

[10] The becoming more automatic is not dissolution, as I believe some think it to be, but is, on the contrary, evolution becoming complete. The highest centres are the most complexly evolving, but are also the least perfectly evolved. In other words, the highest centres are "the ravelled end." In them evolution is most actively going on, whilst in some lowest centres—e.g., the respiratory—evolution is probably nearly completed.

[11] In seeing a small object there may be only excitation of motor nervous arrangements in the highest centres, not passing downwards to middle and lowest.

sensory centres and the middle and lowest motor are not engaged. The highest sensory and motor centres are alone engaged; there is still reflex action, but only the central links of the sensori-motor chain are engaged; the central part only of the whole process which occurred in perception is done over again, and, the excitations being slight, the image arising is faint, and, the lower centres not being engaged, it is feebly and indefinitely "projected"—*seems* more part of ourselves.

Let us see how the doctrine of reflex action applies in the elucidation of the phenomena of an epileptic fit, and thus illustrate again, on a small scale, the dictum that an epileptic fit is owing to an excessive discharge beginning in some part of the anatomical substrata of consciousness. Let us imagine, which for my own part I do not believe, that there is a centre for visual ideation and nothing else—a centre made up of the anatomical bases of visual images only. We "store up" images of innumerable different objects, each of which has some colour and some shape; this means, on the physical side, that the centre we are imagining contains innumerable nervous arrangements, each of which represents different retinal impressions and different ocular movements. These are, anatomically, sensori-motor (retino-ocular) nervous arrangements; physiologically, they are reflex actions. During slight activities of this centre, unprovoked from the periphery (incomplete and weak reflex actions) we have faint visual ideas; during strong activities provoked by peripheral agencies leading to reactions on the periphery (complete and strong reflex actions), we have vivid visual ideas (the parts of the highest centres concerned during perception and during ideation are the same). So far for two degrees of healthy activity. Now, suppose that some of the cells of the nervous arrangements of these centres, by any pathological process, become highly unstable, to a degree such as occurs in epilepsy. The consequence will be that many nervous arrangements occasionally discharge suddenly, excessively, and simultaneously. During such a discharge there would not arise images of many objects differently coloured and shaped; but, on the contrary, there would be crude masses of vivid colour before the eyes, and there would also be a strong development of many ocular movements at once—that is to say, convulsion of the muscles of the eyeballs. Some epileptic seizures do begin by the patient having vivid colour before his eyes; spasmodic turning of the eyes to one side is not an uncommon onset.

There is another matter of vast importance. The pairs of terms on which I have spoken, and some others which I have passed over, are, I think, parallel in meaning, but may not seem so at first glance. We have to mention that evolution is not a necessary process; it depends on conditions. Evolution, so to speak, is not an "even" gradually increasing complexity, &c., from bottom to top. We develop as we must—that is, according to what we are by inheritance; and also as we can—that is, according to external conditions. There is something more: there is what I will call "internal evolution," a process which goes on most actively in the highest centres. On account of its great preponderance in the highest centres of man, he differs so greatly from lower animals. We acquire numerous different ideas—that is to say, there is, on the physical side, an organisation of many different nervous arrangements of our highest centres during actual converse with the environment. When, as in sleep and in "reflection," this actual converse ceases, the quasi-spontaneous slight activity of the highest sensory centres is uninterfered with by the environment, they being protected from it by the lowest and middle sensory centres; and, consequently, there are no reactions on the environment, the highest motor-centre on the slight activity being resisted by the middle and lowest centres; in such cases (sleep, reverie, reflection, &c.) the very highest nervous arrangements of the highest centres, those in which entirely new organisations can be made, will be in least activity, and the next lower of those centres in greater activity. The nervous arrangements of the highest centres, or some elements of them, are "left to fight it out among themselves"; new combinations arise, the survival of the fittest. Manifestly new, although evanescent, combinations are made during during dreaming; but I contend that permanent re-arrangements (internal evolutions) are made during so-called dreamless sleep (I believe that the late Dr. Symonds of Bristol stated this in effect). Internal evolution is supposed to go on in all centres; perhaps, as to some centres, such as those for micturition and defecation, we may say that it has been almost completed; they are nearly autonomous at birth, and are but slightly, I imagine, represented over again in the higher centres, but are much under their inhibition. The doctrine of internal evolution, I submit, accounts for what, at first glance, seems the inadequate number of fibres from lowest centres towards highest. In the highest centres will be a great number of sensori-motor combinations, which do not answer to any actually experienced correspondencies with the environment, and which on their normal excitations do not lead to actual movements; and, in the case of many lowest centres, there will be sensori-motor nervous arrangements for purely "local affairs," which will, I imagine, require little re-representation in the higher centres. Since most mentation, ordinarily so called, is carried on in visual and tactual ideas, or in words, internal evolution in the highest centres leads to a great multiplication of nervous arrangements representing ocular, manual, and articulatory muscles; this is repeating in another way the statement that small muscles are very largely represented in the highest centres.[12] Mentation involves emotion; as the highest emotions are (Spencer) compounded out of the lower, there will be, on the physical side, in man a large re-representation in his highest centres of the organic parts concerned during emotional manifestations. These statements as to very large representations of small muscles and of organic parts in the highest centres accord with the facts that in slight epileptic fits—comparatively slight discharges, beginning in parts of the highest centres—the skeletal muscles chiefly convulsed are the small muscles spoken of; and that there is a very extensive involvement of the organic parts. We have, I think, in the doctrine of internal evolution, an explanation of the disproportionate involvement of organic parts in slight epileptic attacks.[13] In those parts of the middle motor centres especially representing small muscles there are (Bevan Lewis) most small cells (I suppose these will be paths of least resistance). Whether the like obtains or not in the highest motor centres, I do not know.

So far I have, as much as possible, considered a man as a mere machine. I have often, it is true, in preceding remarks, used psychological terms; but I have really been dealing only with the nervous system—have been speaking of the physical conditions underlying mental states. Now, I speak of the relation of consciousness to nervous states. The doctrine I hold is: first, that states of consciousness (or, synonymously, states of mind) are utterly different from nervous states; second, that the two things occur together—that for every mental state there is a correlative nervous state; third, that, although the two things occur in parallelism, there is no interference of one with the other. This may be called the doctrine of Concomitance. Thus, in the case of visual perception, there is an unbroken physical circuit, complete reflex action, from sensory periphery through highest centres back to muscular periphery. The visual image, a purely mental state, occurs in parallelism with—*arises during* (not *from*)—the activities of the two highest links of this purely physical chain; so to speak, it "stands outside" these links.

It seems to me that the doctrine of concomitance is, at any rate, convenient in the study of nervous diseases. It, or an essentially similar doctrine, is held by Hamilton, J. S. Mill, Clifford, Spencer, Max Müller, Bain, Huxley, Du Bois Reymond, Laycock, Tyndall, Hermann, and David Ferrier. Those who accept the doctrine of concomitance do not believe that volitions, ideas, and emotions produce movements or any other physical states. They would not say that an hysterical woman did not do this or that because she lacked will; that an aphasic did not speak because he had lost the memory of words; and that a comatose patient did not move because he had lost consciousness. On the contrary, they would give, or try to find, materialistic explanations of physical inabilities. I do not try to show what is the nature of the relation between mental and nervous states.

The next question is as to range of concomitance. How "far down" in the nervous system does consciousness extend. Lewes thought that some degree of consciousness

[12] It is well known that, after amputation of a limb, the patient retains a phantom limb, or part of one. According to Weir Mitchell, the parts most often remaining spectrally are the terminal parts—the parts having most small muscles. The part of the limb above up to the stump often does not remain spectrally. Here is some further evidence of the specially great representation of parts having small muscles in the highest centres.

[13] What I have described as internal evolution is, I think, essentially the process of which Spencer speaks in chap. vi., Physical Synthesis, Psych., vol. i. I particularly refer to section 246.

or "sensibility" attended activities of even the lowest centres. The current view is that it only attends activities of the highest parts of the nervous system, although no lower limit is agreed upon. Some, indeed, speak of "unconscious states of mind," as if below consciousness there were some faint mental states. I am not sure that I state this view with verbal correctness, as I do not understand it. That activities of the highest, least organised, nervous arrangements, during which consciousness or most vivid consciousness arises, are determined by activities of lower, more organised, nervous arrangements, I firmly believe. As I have said in effect, states of consciousness attend survival of the fittest states of centres representing all parts of the organism as one whole. Roughly speaking, the highest nervous states are determined from below, and not by autocratic faculties acting upon the highest parts of the highest centre. But whether the activities of the lower nervous arrangements have attendant states of mind, however faint or not, is disputable. Less consciousness attends activities of nervous arrangements the more organised and automatic they are or have become, which means that the highest, least organised, least automatic, most imperfectly reflex centres, are the physical bases of consciousness or of most vivid consciousness.

[The lecturer then spoke of those disorders of coördination which occurred only when movements were attempted—started by volition, or, speaking realistically, by discharges beginning in parts of the highest centres. (He did not believe that there was a difference in kind between inferior centres representing impressions and movements, and superior centres coördinating them; the so-called superior coördinating centre was one where impressions and movements represented in the inferior centre were re-represented in more complex and special combinations.) All the disorders of coördination spoken of, he thought, were essentially cases of paralysis, that is, in the sense of there being loss of some movements; there was also an over-development of other movements consequent on greater energising of healthy nervous arrangements; the two elements, negative and positive, constituted the disorder of coördination. Here again was seen, but in another way, the importance of taking note not only of the dissolution, but of the levels of evolution (lower, or higher, or collateral) remaining. He illustrated his hypothesis as to the disorders of coördination mentioned by the case of paralysis of the right external rectus muscle, pointing out that, as an indirect consequence of this purely negative state, there was an over-positive effect on the internal rectus of the left eye (secondary deviation); an ordinary discharge starting in the highest centres failed to turn out the right eye; there being a stronger discharge, there was still no effect on the right eye, but the left turned in too much. Here the direct effect of the negative lesion and its indirect over-positive effect were seen nakedly separate; but he believed that in cases of disorder of coördination, where the same muscles were involved, the principle held; there may be loss of some movements of a set of muscles, and retention of other movements of them. He supposed that in writer's cramp there was some paralysis, in the sense of loss of but a few of the most special movements of writing, represented in some lowest centres, from atrophy of their cells consequent on over-use—that is, abuse. As a result, there was greater energising of the highest centres coming down to compel the atrophic elements of the lowest centres to act. No effect being produced on these elements, the most special of the movements of writing were not developed, but there was an over-development of the more general movements of the same and other muscles, represented in the same and other lowest centres. He thought that the essential condition of things in the reel in destruction of part of the middle lobe of the cerebellum was loss of some movements of the spine, was some paralysis; the erratic movements of the legs were, he thought, consequent on stronger discharges than normal of healthy nervous elements.

The lecturer then stated his opinions as to Localisation, limiting consideration to movements. For illustration, he imagined a centre for the arm and the leg. The "Universaliser" would say that every part of the centre represented both the arm and the leg in the same way; the "Localiser" would say that one part of it represented the arm only, and another part the leg only—would, indeed, make two centres. The latter is the current hypothesis. The lecturer did not take either of these views; he restated the opinion which he had held as to localisation, both before and since the recent experiments of Hitzig, Ferrier, and others on the mid-cerebral cortex. "It may be said that one convolution will represent only the movements of the arm, another only those of speech, another only those of the leg, and so on. The facts above stated show that this is not the plan of structure of the nervous system. Thus, to take an illustration, the external parts, x, y, and z, are each represented by units of the corpus striatum. But the plan of representation is not that some units contain x largely only, as x_3, others y largely only, as y_3, but that each unit contains x, y, and z—some, let us say, as x_3, y_3, z; others as x_3, y_3, z, &c. When we come to the still higher evolution of the cerebrum,[14] we can easily understand that, if the same plan be carried out, a square inch of convolution may be wanting, without palsy of the face, arm, and leg, as x, y, and z are represented in other convolutions; and we can also easily understand that discharge of a square inch of convolution must put in excessive movement the whole region; for it contains processes representing x, y, and z, with grey matter in exact proportion to the degree of complexity."[15] This is only another way of stating the doctrine of compensation and its "inversion," co-operation in excess (see second lecture). This double doctrine, he thinks, applies to representation of movements in the mid-cerebral region of dogs. Destruction of a part of the dog's mid-cortex entails no permanent paralysis, but discharge of any part of it produces convulsion. Ferrier, Charcot, and others have shown, since the part quoted was written, that destructive mid-cortical lesions in monkeys and men entail some permanent local paralysis; in these animals, it would seem that there is less compensation than in dogs. The important question is—Is there some recovery, and thus some compensation, in the case of man? The lecturer did not now suppose compensation for any destructive lesion to be ever absolute. His hypothesis was that the so-called centre for the arm represents that part very specially, but that it also represents the leg and face more generally, and the parts on the other side of the body still more generally; similarly, *mutatis mutandis*, for the other centres. According to this view, destruction of the arm-centre should entail some decided paralysis of that limb, and very little, if any, of the leg and face, which two parts would have also a large representation in, so to speak, their own more particular centres. On the other hand, excessive discharge limited to the arm-centre should produce convulsion, beginning in that limb, and yet spreading beyond it to the leg, face, &c. The currents developed would, however, not be limited to one centre; they would, no doubt, spread to collateral centres, and discharge them; thus a convulsion beginning in the arm and becoming universal was no evidence that a single centre—the arm-centre—represents all four limbs.[16] Yet certain experiments by Franck and Pitres on dogs tended, the lecturer thought, to show that his view of localisation—that every centre represented all parts, but that each centre represented some one very specially—held in the case of those animals. They conclude from these experiments: "Elles démontrent, en effet, que l'épilepsie peut se généraliser bien que l'excitation provocatrice ait été limitée à un seul centre cortical [they isolated the arm-centre, and by stimulation of it produced convulsion of all four limbs] et que la destruction préalable d'un centre cortical [they cut out the arm-centre in another experiment] n'empêche pas l'extension des convulsions aux muscles correspondant au centre préalablement détruit."

It must be said that these distinguished physicians believe, as stated in the first lecture, that "le cerveau commence l'attaque, la protubérance, le bulbe et la moëlle la généralisent." Ablation of the cortical centre, "primitivement excite" does not (Albertoni, Franck, and Pitres) stop the convulsions. Franck and Pitres' argument is very able and powerful; their contention deserves most respectful consideration. No doubt centres in the pons, medulla, and spinal cord (lowest centres) are discharged by the prior cortical discharge. At any rate, the experiments mentioned go towards showing that *all* the lowest centres are under the command of—if they are not all, as the lecturer thinks, re-represented in—*each* part of the mid-cortex. The order of

[14] At that time I arranged centres morphologically, and did not then make a division into highest and middle motor centres. I used to speak of convolutions being the corpus striatum "raised to a higher power." As stated in the second lecture, I now arrange centres on an anatomico-physiological basis. [15] St. Andrews Medical Grad. Trans., 1870.

[16] Of course, the term "centre" is an arbitrary expression; but using the term "centre for the arm," there would in it, one must suppose (judging from the mode of spreading of convulsion in that limb from discharge beginning in part of the centre), be subcentres.

the discharge of all the lowest centres is determined by the particular part of the mid-cortex primarily discharged.

Admitting difficulties in the way of acceptance of his hypothesis of localisation, the lecturer thought the current hypothesis did not account for all the facts. Any adequate hypothesis had to account for the following:—(1) That from a destructive lesion of motor centres the paralysis was especially of the more voluntary, &c.; (2) that from a discharging lesion, the development of movements (convulsion) was the same: an epileptiform seizure starting in the arm began, first of all, in the hand; one starting in the leg began in the foot; one starting in the face, in the side of the mouth; (3) that the progress in each (1 and 2) was in compound order; (4) that a part might be permanently imperfectly paralysed, and yet the whole of it might be occasionally convulsed; (5) that recovery, or some recovery, follows on permanent destructive lesions producing paralysis, there is often, at least, some compensation; (6) that a small destructive lesion of a motor centre may entail little or no obvious paralysis, whilst a sudden and excessive discharge beginning in such part produces (indirectly) very great convulsion; (7) that from discharges beginning in different parts of the mid-cortex, we have fits affecting the same regions, but their parts in different order ("isomeric seizures"); (8) that a patient, who has no paralysis before a convulsion, has much (temporary) paralysis after it. Cases of monoplegia (the paralysis only existing after a convulsion) must not be adduced as evidence to show that any lesion found post mortem, say a tumour, had produced paralysis by its direct, its destructive, action.]

ON INJURIES OF THE KIDNEY.

BY R. CLEMENT LUCAS, B.S. LOND., F.R.C.S.,

SENIOR ASSISTANT-SURGEON TO GUY'S HOSPITAL, AND TEACHER OF OPERATIVE AND PRACTICAL SURGERY IN THE MEDICAL SCHOOL; SURGEON TO THE EVELINA HOSPITAL FOR CHILDREN.

(*Concluded from page 700.*)

IN the following case, related by Mr. Pollock,[1] the plugging of the ureter was verified by a post-mortem examination made six months after the injury. A man, aged thirty-seven, was kicked by a horse, and when seen was in a state of extreme collapse, from which he gradually rallied. The urine at first passed was mixed with blood; on the day following the injury there was less appearance of blood, and subsequently the urine was free from blood. There was a swelling on the right side of the abdomen. He gradually recovered, and left the hospital six weeks after the accident. He was admitted again about six months later, suffering from anasarca, oppressed breathing, and urine loaded with albumen. He died a week after admission. Both kidneys were found small, granular, and full of cysts. The cellular tissue around the right kidney was much consolidated. A large clot of blood occupied the pelvis and the interior of this kidney, and communicated also with the exterior of the organ, where a considerable quantity of coagulum lay in the subperitoneal substance around the gland. The line of rupture of the kidney could be faintly traced through the substance of the gland. The blood was solid, and only partly decolourised. The ureter was impervious, owing to coagulum.

Again, in other instances, the blood flows into the bladder in quantity, and there coagulates, giving rise to painful distension, with straining and constant yet unavailing effort to micturate. It then becomes necessary to empty the bladder by means of a full-sized silver catheter, one having an aperture at the extremity closed by a flexible stilette being best adapted for the purpose. The clots may be broken up and dislodged by the injection of salicylated or carbolised water. Bigelow's aspirator and cannulæ, that are used for litholapaxy, might be found of service in relieving the bladder of its contents. Meanwhile every effort should be made to control the internal hæmorrhage by means of an ice-bag applied to the loin and the front of the abdomen and the internal administration of styptics. The drugs which are usually given with this object are the lead and opium pill of the Pharmacopœia, or from five to ten grains of gallic acid every few hours, with infusion of matico; but we have in ergotin, probably, a drug which, injected subcutaneously in doses of from three to five grains, will produce a much more rapid effect than either of these. When the blood has a tendency to rapidly re-collect in the bladder, it is well to retain in the urethra a large flexible catheter, to which an indiarubber tube may be attached and be allowed to drop into a vessel beneath the bed, so as to act as a syphon. The distress occasioned by the accumulation of blood-clots in the bladder suggested to the surgeon in one instance the advisability of performing cystotomy, to obtain for them a free exit.[2] Before doing this, the surgeon ought, I think, to exhaust the other means at his disposal, and then to weigh the advantage to be gained with the additional risk incurred; for the wound of a perineal cystotomy is one which must be exposed to infective processes, and the decomposition of a large blood-clot in the bladder is a matter of considerable moment, since the remaining kidney may thereby be contaminated, and its powers of secretion be seriously interfered with. In the case alluded to, pyelitis of the uninjured kidney was believed to be the cause of death; but it is fair to state that cystitis had existed before the cystotomy was performed.

Injury to the kidney is generally followed by some collapse, and the usual signs of hæmorrhage—pallor, cold surface, vomiting, dilated pupils, rapid, compressible, and jerking pulse. When the bleeding is severe, there are in addition thirst, restlessness, and anxiety. The muscles will be found contracted over the injured organ, and after a time increased dulness on percussion will be evident in this region. The pain is great, and has been such as to suggest peritonitis in cases where no inflammation of the peritoneum was found after death. Pain along the course of the ureter, in the groin and upper part of the thigh, with retraction of the testis, may be sometimes present, and is due, I believe, to the lodgment of clots in, or to their passage through, the ureter, rather than to the injury of the kidney itself. The secreting structure of the kidney, indeed, appears to be very insensitive.

It is important to notice that extravasation of urine and suppuration are rare consequences of rupture of the kidney, and I am inclined to think that escape of urine in the perirenal cellular tissue is never met with unless the pelvis of the kidney has been opened or the ureter torn. In other words, the ruptured surface of the kidney will not secrete urine, or, at most, not in sufficient quantity to excite suppuration or form a fluid tumour. Should, however, an injury to the kidney be followed by a peri-nephritic abscess, which would be indicated by the presence of a swelling, high temperature, sometimes, but not always, preceded by retraction of the thigh and œdema in the loin, no time should be lost before making a free incision in the loin for the evacuation of the pus and urine. In the majority of cases, incision, distension of the abscess sac with dilute carbolic lotion, and the insertion of a large drainage-tube, will be followed by contraction of the abscess cavity and cure. As an instance of cure effected by drainage, I may mention Mr. Marshall's case, detailed in the Medical and Chirurgical Transactions.[3] A girl, aged thirteen, had been run over by a cart, and in consequence confined to bed for a month, after which she was able to attend school. Nine months later she was found to have a large tumour on the left side of her abdomen, filling up her loin. This proved to be a suppurating hæmatoma, containing some of the constituents of urine. It was first punctured, then drained through its most prominent point on the front of the abdomen, and the patient was cured in about four months. A somewhat similar case, recorded by Dr. West, was not cured by drainage, and it was found necessary, some three months later, to remove the kidney, which had undergone distension with destruction of its secreting structure.[4]

When a kidney has been severely damaged by some crushing force, and the hæmorrhage into the bladder is very great and difficult to control, it may become a question whether benefit could not be afforded by excising the injured organ. How far nephrectomy under such circumstances may be justifiable, we want more experience to determine. The difficulty will be to decide whether the symptoms are sufficiently severe to call for interference; and then, whether the risk of exposing and removing the organ may not add to, rather than diminish, the danger. Hæmorrhage from the kidneys, if not rapidly fatal, becomes

[1] Pathological Society's Transactions, vol. xi., p. 140.

[2] Proceedings of the Royal Medical and Chirurgical Society, May 22nd, 1883.

[3] Vol. lxvi., p. 311.

[4] Brit. Med. Jour., April 7th, 1883.

arrested by the pressure and coagulation of blood on its exterior, and in many instances, as I have demonstrated, by the plugging of the pelvis and ureter, or of the main vessels. In the following case, narrated by Dr. Rawdon,[5] the kidney was excised on account of the cystitis occasioned by the blood-clots in the bladder, but after carefully reading the history of the case, I am inclined to doubt the wisdom of the course pursued. A boy, aged twelve, fell a distance of eight feet on to a stone basement, and when seen on the following day was passing blood in his urine. There was a bruise over the crest of the right ilium, and he complained of pain in the right side. Hæmaturia diminished for the first few days, but subsequently increased, and was followed by acute cystitis. On the seventeenth day after the injury, with the object of preventing blood entering the bladder, the damaged kidney was removed by a lumbar incision, when it was found to have been torn nearly completely across. Relief is said to have followed the operation, but subsequently symptoms of acute cystitis again showed themselves. Four days later—that is, on the twenty-first day after the injury—lateral cystotomy was performed, when fetid blood-clots were removed and a free drain for the urine was established. Relief was afforded by the cystotomy so far as the symptoms directly traceable to the bladder were concerned. The patient died on the fortieth day after the injury, from pyelitis and circumscribed suppuration of the left kidney. It will be noticed that the nephrectomy in this case was performed not on account of symptoms referable to the kidney itself, but on account of cystitis occasioned by the presence of blood-clots in the bladder. It appears to me that it would have been more judicious to have first washed out and drained the bladder through a catheter, and, failing to give relief in this way, to have performed cystotomy before subjecting the patient to nephrectomy.

Incised wounds of the kidney.—Cases may be met with in which the kidney has been injured by an incised wound through the loin, and these do not present the same difficulties as those in which no external wound exists. The amount of bleeding or the damage done to the kidney will determine the operation. There are two cases recorded in which after an incision in the loin the kidney protruded through the wound. In each case the kidney was removed, and the patient recovered. In Brandt's case,[6] the patient received a deep cut in the left flank with a knife, and two hours later, during a fit of coughing, the kidney protruded through the wound. It was replaced by a friend, but again prolapsed, and was found to be nearly divided into two, and to be pouring out clear fluid. The organ was insensitive, and the patient suffered little in health as a consequence of the protrusion. It was removed on the fourth day, without chloroform, the pedicle having been first ligatured in two portions. In Marnaud's case,[7] a woman was wounded in the right loin with a yataghan, which dragged the kidney out of the wound. The pedicle was ligatured and the organ allowed to slough off, which it did after some weeks. The patient was quite well two months after the injury.

The treatment of injuries to the kidney has been considered generally in the foregoing pages. It may be briefly summed up under the following heads:—(1) To arrest the hæmorrhage; (2) to guard against peritonitis; (3) to obtain free exit for clots, and guard against septic decomposition in the bladder; (4) to drain through the loin in the case of extravasation and suppuration; (5) to drain in case of pyonephrosis following the injury; (6) to remove the kidney if structurally destroyed by suppuration, or irrecoverably damaged as a result of the injury. To carry out the first of these indications ice should be applied locally and styptics given internally, among which may be mentioned as the most reliable ergotine, gallic acid, plumbic acetate, matico, and turpentine. Stimulants should be avoided, and the diet for a time limited to milk and ice. Opium may be given, but in small quantities, and with caution. By these means peritonitis may be prevented or alleviated. To gain free exit for clots, a large catheter and drainage of the bladder may be required, washing out the bladder with disinfectant injections, and possibly cystotomy may be afterwards found necessary. Should high temperature, with increased swelling and tenderness of the loin, follow, and especially if these signs be accompanied by rigors and the occurrence of œdema in the flank, a transverse or oblique incision should be made through the loin and an aperture be established just external to the quadratus lumborum. Finally, there are cases of severe damage with prolapse which may require immediate nephrectomy; others in which this operation may be advisable on account of severe hæmorrhage; and, again, some where, the kidney having become disintegrated and useless, its removal is essential for the purpose of terminating the exhaustion by suppuration, of which it is the sole cause.

Finsbury-square, E.C.

[5] Proceedings of the Medical and Chirurgical Society, May 22nd, 1883.
[6] Brandt: Wien. Med. Wochensch., Nov. 1873, p. 1079.
[7] Revue de Méd. Milit., Oct. 1875. These cases are rather fully abstracted in Mr. Barker's paper, Med. Chir. Trans., vol. lxiii., p. 185.

CASE OF

PURPURA OCCURRING IN THE COURSE OF TYPHOID FEVER.

BY THOMAS BARLOW, M.D., F.R.C.P.,
ASSISTANT-PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.

AMONGST the cases admitted to University College Hospital last autumn belonging to the Camden-town typhoid epidemic there was one presenting purpuric symptoms which seems worthy of record. The patient was under my care during the earlier part of her illness, and under the care of Dr. Bastian during the later part, to whom I am indebted for allowing me to quote the completion of the case. The valuable notes from which I have chiefly abstracted the account were made by Mr. Thring, house-physician.

L. F——, aged twenty-six, a saleswoman, was admitted on Sept. 10th, 1883, on what was probably the eleventh day of her illness. Her symptoms before admission had been headache, inappetency, and general weakness; for three days she had been constipated. When admitted she had an abundant crop of rose-red spots on the front of the trunk. There was no distension of the abdomen, no gurgling, and no palpable enlargement of the spleen. The tongue was tremulous, moist, and red along the edges, dryish in the centre. Afternoon temperature 102·4°; pulse 110. She was ordered two pints and a half of milk, one pint and a half of beef-tea, and three ounces of brandy in the twenty-four hours, and to have wet compresses applied around the trunk whenever the temperature should be 102°, and whenever it should be 103° to have an ice-cap applied to the head. During the night the temperature rose to 103·8°. At 7 A.M., Sept. 11th, it was 101·8°. She had had no delirium, cough, or vomiting. There were fresh spots present. The highest temperature on this day was 104·5° at 7 P.M. On Sept. 12th she had passed one small stool of pea-soup consistence, and the abdomen was slightly distended. Her tongue was dark-red, rather dry, almost free from fur. There was a little dried blood on her lips and she had spat up some frothy mucus mixed with a little blood, but not streaked. It had almost certainly come from the mouth cavity. The highest temperature was 103·4° at 7 P.M. and the lowest 101·6° at 11 P.M. Her urine examined to-day was acid, had a specific gravity of 1020, contained some lithates and was free from albumen.—3rd: There were same fresh spots on the abdomen. One small, loose stool was passed stained black. Some more mucus uniformly mixed with blood had been spat out, probably derived from the mouth cavity. Lowest temperature 100·6° at 11 A.M.; highest 102·6° at 11 P.M. Morning pulse 100; respiration 28.—4th: Patient passed two stools during the night, which were slightly liquid and contained a few loose dark masses of altered blood, no compact clot. After this she had fifteen drops of laudanum given to her. She lay on her back and was very apathetic. There was reported to be a slight bloody discharge from the vulva, regarded by the nurse as menstrual. Pulse 96, somewhat compressible; respiration 24; temperature at 3 A.M. 98·4°, at 7 A.M. 99·8°, at 3 P.M. 97·6°, at 7 P.M. 102·4°, at 11 P.M. 103·2°. There are two fresh spots on the abdomen. She spat up some more blood-stained mucus. Whilst I was examining her mouth in the afternoon I saw three small ecchymoses in the mucous membrane of the palate, and another suddenly appeared under observation. There was no ulceration to be seen about the throat, gums, or palate, and the larynx was natural. In view of the two black stools and the low temperature one was bound to consider the possibility of deep ulceration of the bowel; but it was

to be observed there had been no abdominal tenderness and very little tympanites, and the stools previously had been small in number and quantity. The occurrence of oozing of blood from the mouth made one ask whether the bleeding from the bowel might not conceivably be of like nature, proceeding from the inflamed Peyer's patches, not from an ulcerated vessel, but, to quote Trousseau's simile, in a manner comparable with epistaxis. The patient was ordered an ice bag to the abdomen, and five drops of turpentine to be given every six hours on lump-sugar.—15th: She slept during the night, but vomited slightly after taking the turpentine. She passed one black stool; during the day she passed two others. The abdomen was a little more distended; and there were some fresh spots on the thorax. Pulse 112; respiration 32. There were a few râles audible at the bases. Tongue red, and almost free from fur. A few more ecchymoses were seen on the palate, and there appeared to be a scanty fine oozing of blood continually from the mouth, although there was no sponginess. The discharge from the vulva, whether menstrual or not, ceased. The highest temperature, 103·6°, was at 3 A.M. and 7 P.M.; lowest temperature, 102·6°, at 11 A.M.—16th: Two stools passed during the night contained a few small black clots. The patient has passed some smoky urine containing blood-corpuscles. The lowest temperature was 99·8° at 11 A.M., and the highest was 103·6° at 7 P.M.—17th: The patient has passed another small dark stool, and some urine, still smoky from presence of blood. There are many purpuric spots on both arms, and two on the chest, varying in size from a millet seed to that of a split pea; on the thighs, legs, and right shoulder there are deep and more extensive bruise-like extravasations, some the size of a shilling, and others the size of a half crown piece. The tongue is clean and moist. The oozing of blood from the mouth is much lessened. The larger spots of extravasation in the mucous membrane of the palate have disappeared, but are replaced by numerous minute punctæ. Ophthalmoscopic examination revealed nothing abnormal in the fundus oculi. Lowest temperature this day was 97·6° at 3 A.M.; the highest temperature was 103° at 3 P.M. It seemed clear that the turpentine had not controlled the purpuric tendency in any way, and that perhaps, indeed, it was responsible for the smoky urine. The ammoniated extract of ergot, in twenty-drop doses every five hours, was substituted for it.—18th: The patient vomited once after the ergot, and had a restless night. She has passed another dark stool and forty-six ounces of urine during the last twenty-four hours, slightly smoky, but much less so than yesterday. It was acid, of specific gravity 1015. Only lithates and a few blood-corpuscles to be seen on microscopic examination. She passed one small dark stool during the night. Another was passed during the day, which contained much less dark material. The tongue is clean, not so red as hitherto; the ecchymoses on the palate are disappearing. Many of the small petechiæ on the arms have faded somewhat; whilst the larger extravasations on the thighs have deepened in colour and extended a little. Morning pulse 100, very compressible. Heart sounds weak; respiration 32. Lungs resonant; no râles. Lowest temperature, at 7 A.M., 99·8°; highest temperature, at 7 P.M., 103·2°.—19th: Much improved. Petechiæ all fading. Urine free from blood. Specific gravity 1010, with a very slight deposit of lithates. Morning pulse 102; respiration 32. Lowest temperature, at 3 A.M., 99·4°; highest temperature, at 3 P.M., 103·4°. Bowels not opened. Ergot mixture reduced one-half.—20th: Temperature, 3 A.M., 100°; 7 P.M., 102·8°; pulse 100; respiration 32. Urine clear and no albumen.—21st: No fresh petechiæ. Temperature, 7 A.M., 99·4°; 7 P.M. 102·8°; pulse 104; respiration 28. After enema had one stool, which was copious and formed, but of dark colour. Urine natural. Ergot mixture omitted.—22nd: Condition better, except in regard to temperature, which at 7 A.M. was 99°, but at 7 P.M. became 104°. Bowels not opened.—23rd: Temperature, 11 A.M., 99·6°; 3 P.M., 102·8°.—24th: Temperature, 7 A.M., 98·4°; 6 P.M., 103·4°. Bowels moved after enema. Stool partly formed, mostly light in colour, a small portion stained black.—25th: Tongue clean; palate very pale. A little distension of abdomen. Temperature, 3 A.M., 99·4°; 3 P.M., 103·4°.—26th: Tongue clean, but abdomen a little more distended. Temperature, 3 A.M., 101·6°; 7 P.M., 105·2°. Bowels moved after enema.—27th: Temperature, 3 A.M., 101°; 10 P.M., 104·8°.—28th: Early this morning the patient passed a typical typhoid stool of pea-soup consistence. Two others were passed during the day. The distension of the abdomen was not increased; there are no fresh typhoid spots. No ecchymoses. Pulse, 11 A.M., 140; respiration 28. Temperature, 3 A.M., 104°; 3 P.M., 104·4°; 7 P.M., 103·2°.—29th: Much tremor around the mouth. Pulse feeble and rapid, 144; respiration 36. Lowest temperature, 7 A.M., 101°; highest, 7 P.M., 104·2°.—30th: Lowest temperature, 7 A.M., 102°; highest 104°. Four loose stools passed during the day.

Oct. 1st.—Tongue glazed, red, and cracked; sordes on teeth; some fresh rose-red spots on abdomen; pulse, 11 A.M., 132, very compressible; lowest temperature, 3 A.M., 102·8°; highest, 3 P.M., 104·6°. Four stools.—2nd: Lowest temperature, 3 A.M., 104·2°; highest, 3 P.M., 105·6°. Four stools.—3rd: Highest temperature, 3 A.M., 104°; lowest temperature, 11 P.M., 101·4°; pulse 148; respiration 36. Five stools.—4th: For the last two days the patient has been very prostrate, and there has been much delirium. Pulse, 11 A.M., 160; respiration 40; temperature, 3 A.M., 103·8°; 3 P.M., 103·2°. Four stools.—5th: Still delirious. Pulse 144; respiration 56, laboured in character, and accompanied often by short grunting noise such as to make one suspect the presence of pneumonia. Too ill to examine properly. Temperature, 11 A.M., 102·4°; 11 P.M., 104·6°.—6th: Temperature, 7 A.M., 101°; 11 A.M., 104·4°; 11 P.M., 102·6°.—7th: Temperature, 7 A.M., 101·6°; 7 P.M., 102·6°.—8th: Extremely prostrate. Passes her urine under her. No fæces have been passed for four days. Vomits her food, and does not retain nutritive enemata. Pulse 160; respiration 52; temperature, 7 A.M., 99·4°; 11 P.M., 101·8°.—9th: Temperature, 8 A.M., 99°; 11 P.M., 104·6°; pulse 160; respiration 60.—She gradually became unconscious and unable to swallow, and died on the morning of October 11th.

Autopsy, six hours after death.—Rigidity well-marked. Much emaciation. Heart: Besides dark fluid blood, there were extensive decolourised and adherent thrombi in the right auricle and ventricle and left auricle; no disease of valves; heart substance pale. Left lung: Hepatisation of lower lobe. Right lung: Lower lobe collapsed, covered with yellowish lymph. A considerable quantity of turbid effusion into right pleura. No ulceration of larynx. In the upper part of the posterior mediastinum, in front of the œsophagus and around and above the root of each lung, there was a blood extravasation into the areolar tissue, about the size of a hen's egg. Also in the retro-peritoneal tissue, opposite the hepatic flexure of the colon, there was a flattened extravasation of blood about the size of the palm of the hand, and extending downwards towards the brim of the pelvis. In neither of these regions could any evidence of rupture of a large vessel be found. Peritoneum healthy. Mesenteric glands swollen; those near junction of ileum and cæcum almost diffluent on section. Three feet above the ileo-cæcal valve there was a small ulcer, from which the slough had separated and the edges of which had become rounded. Below this, at short intervals, were other ulcers having rounded edges which were pigmented. Just above the ileo-cæcal valve there was a considerable extent of ulceration; but here, also, the edges were rounded and pigmented. Only one ulcer above the valve presented thin overhanging margin. In the cæcum and ascending colon the mucous membrane presented a very different condition. There were about thirty ulcers, each with thick raised edges and yellowish slough, which in some cases had begun to separate, leaving a punched-out depression. There were also many considerably swollen agminate glands presenting a characteristic furuncle-like appearance. There were small ulcers through the other part of the colon up to the sigmoid, and here there was no slough. There were also some small ulcers in the rectum. The spleen was enlarged and flaccid. It contained near the surface a softening caseous mass and about eight wedge-shaped infarcts, the size of a pea and of various degrees of decolourisation. There was also one infarct in the right kidney. The liver was rather pale, but the lobules well-defined. There was a thin layer of blood effused under the dura mater over both hemispheres. Nothing else was remarkable about the brain.

Remarks.—The post-mortem established what had been obvious during life, that in this case there was a primary attack which was followed by a relapse before the primary attack had come to an end. In the first attack probably the small intestine was almost exclusively affected; although there were small hæmorrhages, the bowels were only very slightly relaxed; there was very little tympanites, and the lungs were singularly free. In the second attack for five days the stools were four to five daily, and were of typical

pea-soupy character. During the last week there was constipation. It seems certain that in the relapse the large bowel was chiefly affected, and there was much enlargement of the spleen and extensive lung complication. The temperature on the whole ran much higher during the second than during the first attack, and during the first attack was more easily controlled by the cold applications than during the second. The chief interest of the case relates to the purpura, which occurred exclusively during the primary attack. It commenced on the thirteenth day of the illness with oozing from the mouth cavity. This continued for six days, and a few petechiæ remained on the palate for two days longer. It is possible that the thin bloody discharge from the vulva which appeared on the fifteenth day of the illness, and lasted for about twenty-four hours, was allied mucous hæmorrhage. The appearance of small quantities of dark blood in the stools extended from the fifteenth to the twenty-fifth days—that is, it overlapped the bleeding from the mouth by about six days, but the last quantity passed was quite minute. The blood in the urine extended over three days—viz., from the sixteenth to the eighteenth day. The purpuric spots on the arms and the larger extravasations on the lower limbs and on one shoulder appeared on the eighteenth day, but I do not think any fresh petechiæ appeared after the twenty-first day, when all those present were rapidly fading. It is noteworthy that the skin extravasations, unlike hæmorrhagic measles and small-pox, had no relation whatever to the proper typhoid eruption, which did not become purpuric. It seems probable that some of the splenic and renal infarctions and the curious extravasation found post-mortem in the posterior mediastinum and in the retro-peritoneal tissue may have occurred during this purpuric period. Also, in spite of the fact that it was still liquid, it is not impossible that the blood which was found on the surface of the hemispheres may have oozed out about the same time as the above. It appears worth emphasising that the primary attack, during which the purpura exclusively occurred, was a moderate if not a mild one, and that, so far as one can judge, the purpura in no way contributed to the fatal issue. Purpura is no doubt a rather rare complication of typhoid fever, but it is worth investigation whether when it does occur it has necessarily the grave import which has been ascribed to it. Dr. Wickham Legg, in a recent paper in the St. Bartholomew's reports, refers to a case of purpura in typhoid recorded by Schneschknow. The patient was a child of six. Purpura appeared on the sixteenth day. Bleedings occurred from the nose, mouth, under the skin, and in the urine and the stools. But recovery set in on the twenty-first day, when the bleedings ceased. Dr. Murchison[1] speaks of having met with purpura spots and vibices in rare cases, several of which recovered. It is probable, therefore, that when purpura occurs in typhoid it is not necessarily a sign of malignancy.

ON

URETHRAL FEVER AND CATHETER FEVER.[2]

BY J. C. OGILVIE WILL, M.D., F.R.S.E.,
SURGEON TO, AND LECTURER ON CLINICAL SURGERY AT, THE ABERDEEN ROYAL INFIRMARY.

FEVER following urethral instrumentation has recently received not a little attention; but although much has been said and written concerning it, it seems to me that a sufficiently distinct line has not been drawn between two conditions which, while they bear a certain resemblance to each other, are really essentially different. I refer to what has been for long known as urethral fever on the one hand, and what Sir Andrew Clark has termed catheter fever on the other. The object of this communication is to define as distinctly as may be the two disorders, and to point out wherein they differ, and I think that it will not be difficult to show that they do so in causes, symptoms, and results.

Urethral Fever.—This term is applied to a pyrexial condition which not infrequently follows the dilatation of a stricture by the passage of a bougie, or a simple urethral exploration. It assumes different forms, the most common one being the occurrence of a rigor, high temperature, 100° to 106° F., and sweating some hours after instrumentation has taken place. The rigor most commonly, but far from invariably, supervenes on the first urinary act following the operation. The symptoms are of short duration, the patient frequently being perfectly well on the following day, or at most suffering from slight headache and malaise. This is what I regard as a typical case of urethral fever, but many divergences from this type are met with. There is, for example, a form of urethral fever where one or two slight rigors, with slight fever, and no sweating constitute the entire symptoms of the malady, and there are cases—I met with one recently—where the shock is so profound that prolonged and extreme collapse speedily follows the rigor (my patient was in this state for two days, but ultimately recovered), suppression of urine, uræmia, and death ensue. The conditions just referred to are well known, and have for long been described in all standard works, and various explanations of their origin have been offered. Some have stated that urethral fever arises from the absorption of urine through some damaged portion of the urethra where the instrument had abraded the mucous lining of the canal, and this view was founded chiefly on the fact that the symptoms of the disorder did not show themselves until after the first act of micturition subsequent to the operation. This view cannot be upheld for two reasons—viz., first, because urethral fever is met with very frequently where the urine is perfectly normal, and where its absorption would be, as experiment has shown, perfectly harmless; and second, because in many cases no injury to the urethral walls has taken place. Another explanation is founded on the state of the kidneys prior to the commencement of urethral treatment, but one valid objection to this view must at once occur to the minds of all those who have had much experience of operative procedures on the urethra—viz., that while ordinary catheterism or the simple passage of a bougie may be followed by urethral fever, the performance of much more serious operations may in the same subject be unattended by it. This fact is so well known that it seems almost unnecessary to cite any evidence in proof of its correctness, but if such were wanting most surgeons would be able to recall cases similar to one recently under my treatment, where the passage of a bougie through a stricture was followed by rigors, a temperature of 105·4°, and profuse sweating, but where the subsequent performance of internal urethrotomy gave rise to no untoward symptoms. Neither of the two explanations just spoken of seems to me to be worthy of acceptance, and for my own part I cannot but believe that the only tenable hypothesis regarding the causation of urethral fever lies in the reflex theory, and this view, I am glad to observe, seems to be gaining ground among those who have studied this subject attentively.

Catheter Fever.—This form of disorder is chiefly met with in men suffering from retention resulting from enlarged prostate. It frequently commences on the second or third day after catheter life is entered on, and its symptoms are those of irritative fever. The patient is sick and feverish, complains of nausea, has a red tongue, which becomes dry and contracted, the skin is harsh and dry, and sometimes clammy, he becomes gradually weaker, sinking slowly, death occurring two, three, or four weeks afterwards. The urine, which when first drawn off may be comparatively healthy in appearance, soon becomes alkaline, and deposits a large quantity of stringy mucus in the vessel; it frequently contains pus and swarms of micrococci.

The occurrence of the train of phenomena above described attracted my attention many years ago, and I have on frequent occasions directed the attention of our clinical class to the possible dangers of catheterisation in cases of chronic retention; and I may mention here, before entering on the causes of catheter fever, that it may be prevented with a very considerable degree of certainty by attention to two matters of detail—namely, the use of an aseptic catheter, and at first drawing off only part of the retained urine instead of completely emptying the chronically distended viscus.

Regarding the causes of catheter fever, I was for long under the belief that it had a mechanical origin—that the sudden removal of the support afforded to the walls of the bladder by the retained water so affected the lining membrane of the vesical cavity that a low form of inflammation resulted, and subsequently spread to the kidneys. This belief was engendered by the clinical fact to which I have just now alluded—namely, that if the bladder be only partially

---

[1] Continued Fevers, p. 515.

[2] This paper was written before the publication of Sir Andrew Clark's article on Catheter Fever, which appears in the April number of the Edinburgh Medical Journal.

emptied catheter fever does not ensue. But a recent and careful consideration of the subject has led me to adopt a different view, for, while I still believe that the changes in the condition of the circulation arising from the diminution of pressure have a not unimportant bearing, I am now of opinion that the cause of catheter fever is the introduction of putrefactive germs into the vesical cavity, and that such is the most likely explanation is proved by post-mortem examination of the bodies of those who have succumbed to this malady, for the appearances met with are precisely similar to those encountered in other parts of the body when sepsis is the cause. The bladder is generally inflamed and sloughy, the ureters and pelves of the kidneys congested, the kidneys are riddled with small abscesses, and micrococci abound everywhere, the bladder, ureters, and straight and convoluted tubes swarming with them. And here the question arises, How do the germs of putrefaction gain access to the bladder? A few years ago the answer would have been a very easy one, but since the value of an aseptic catheter has been universally acknowledged, we have to look further afield, and in doing so we may inquire what bearing the partial or incomplete emptying of the bladder has on this point. To my way of thinking it has a very important one, and furnishes the required explanation; for if the bladder be completely emptied, there is great probability of regurgitation of air through the catheter taking place, and this is more likely to occur if digital compression of the hypogastrium has been required to cause the urine to flow, or if the patient has used voluntary efforts to expel the last few drops of water, and both of these occurrences are probable enough, for the muscular expulsive apparatus of the bladder is frequently almost, if not completely, useless. If only a partial withdrawal of the vesical contents be practised, the danger of the ingress of germ-laden air is obviated, and thus we are furnished with an explanation of a clinical fact, the existence of which I have for long been familiar with, but which I have been unable until lately to satisfactorily account for. The putrefactive germs having thus gained access to the bladder, find in its lining membrane, which is in a stretched and weakened state, a very suitable nidus for their development, the result being the production of the pathological changes above described.

In conclusion, I would remark that in my desire to make this paper as brief as possible, I have purposely omitted many points of great interest and importance, but I have endeavoured to show that urethral fever and catheter fever are two totally different disorders, and if I have in any measure succeeded, the end I had in view has been attained.

Aberdeen.

ON CYSTS AND CYSTIC TUMOURS OF THE BREAST.

By HENRY T. BUTLIN, F.R.C.S.,

ASSISTANT-SURGEON AND DEMONSTRATOR OF DISEASES OF THE LARYNX, ST. BARTHOLOMEW'S HOSPITAL.

No. II.—CYSTS OF THE CONNECTIVE TISSUE.

SOME years ago a breast which had been amputated for carcinoma was sent to me for examination. It was well formed, and there was no retraction of the nipple. It contained a tumour about the size of a racket ball, situated deep down in the substance of the gland. The breast had been removed from a woman between forty and fifty years old, who had noticed the lump about three months, and believed that it was caused by a slight blow some time previously. There was no glandular affection. The smoothness of the tumour made me a little suspicious of its nature, and palpation before cutting into it led me to think that there was very indistinct fluctuation. No sooner was the knife thrust into it than there spurted forth a small quantity of turbid fluid, and the tumour quite collapsed. It proved to be a single, very smooth-walled cyst, about as large as a walnut. The cyst-wall, examined microscopically, was fibrous, and there was no epithelial lining such as one finds in the glandular cysts, although here and there epithelial, or more properly endothelial, cells were visible upon the inner aspect of the wall. There were no intra-cystic growths. Shortly before this I assisted Mr. Savory in an operation on the breast of a lady supposed to be suffering from cancer. The tumour, as in the last case, lay very deep down in the substance of the gland, and was so surrounded by fat that it was very difficult to convince oneself of the exact consistence of the growth. Under these circumstances the just precaution was taken of making a preliminary incision into the tumour. Fluid spurted forth as if from a syringe, showing how tightly it had been encased. The cyst was removed; it proved to be a simple, smooth-walled cavity, bearing similar general characters to the cyst in the last case.

In August, 1880, a lady, forty-three years old, was sent to me by Mr. Thomas Taylor, for the removal of a tumour of the breast, which she first noticed about two months previously. Since that time it had increased but little, if at all, though it had become slightly painful, especially during the last two or three days. She knew of no cause for its occurrence. It was situated in the upper and outer part of the left breast, was the size of a pigeon's egg, not clearly defined, knotty, very firm, almost hard, not fluctuating at any point. It appeared to be continuous with the mammary gland, with which it moved freely. The skin was dimpled, but not adherent; the nipple was not retracted; there was no enlargement of the axillary glands; the patient seemed to be in excellent health, though, naturally, alarmed at the presence of the tumour. I thought it was a carcinoma, and made all preparations to remove the breast. The absence of retraction of the nipple, of adherence of the skin and of enlargement of the glands, did not materially affect the diagnosis, for these signs of carcinoma are not invariably present, especially in cases presumably so recently developed as this was. However, an incision was first made; a cyst was opened, from which clear fluid escaped, and the error of diagnosis was corrected. A little tumour was removed, consisting of three small cysts in a mass of indurated tissue, the largest of them was about the size of a nut; they were thin-walled and smooth, and neither of them contained any intra-cystic growths. The lining of the cavities was similar to that in the first case; the solid tissue between them was composed of fat, fibrous tissue and glandular structures, with a slight infiltration of leucocytes.

These cases are very good examples of a disease which has not been so carefully described in the later treatises on diseases of the breast as it deserves to be. It is without doubt the same disease which Birkett has called the simple cyst of the breast containing serous fluid.[1] Billroth, Gross, Labbé and Coyne, Follin and Duplay, take so little notice of it that they scarcely seem to recognise its existence. Yet it is not at all uncommon. I have myself notes of five cases, and have seen two or three others of which no notes were taken. I have not, however, been able to collect more than a very few from surgical literature, not because they are not recorded, but because the records are imperfect, especially with regard to the structure of the cyst-wall, and there is not sufficient evidence to prove that the disease is not of glandular origin. The cysts form in the connective tissue of the mamma by gradual accumulation of fluid in the spaces between the fibrous bundles; the dilatation is not necessarily confined to a single space, but may affect several neighbouring spaces, which communicate to form a single cyst. The surrounding structures are condensed, and a more or less thick wall is produced, which is often lined with a layer of endothelial cells. The knowledge which we now possess of the relation of the interfibrillar spaces to the lymphatic system, and the endothelial lining of the cysts, might lead us to infer that many, if not all, of these cysts are lymphatic cysts. Indeed, they have been so described by Mr. Gadsby[2] in the case of a breast removed by Mr. Marshall at University College Hospital. There were many small cysts scattered through the substance of the breast, but the chief disease consisted of one smooth-walled cavity, containing brownish mucoid liquid. A fragment of the wall of the cavity, stained with nitrate of silver, displayed a perfect endothelial lining, with stomata between the cells; a circumstance which led Messrs. Marshall and Gadsby to term the disease "lymphatic cysts." The researches of the last few years have taught us to believe that many of the cysts which were formerly termed "serous" are in reality lymphatic; the congenital hygromata and the cavities in macroglossia afford notable examples of this. The cause of the accumulation of fluid in the lymphatic spaces is not, in the majority of cases,

[1] Vide THE LANCET, vol. ii., p. 105, 1868.
[2] Ibid., vol. i., p. 234, 1878.

clearly apparent. It may be in the passage of a greater quantity of fluid through the tissues than is natural or in an obstruction to the passage of the natural quantity of lymph. It is quite conceivable that a certain number of cysts may owe their origin to inflammation, especially to the chronic forms of inflammation, which, producing more permanent tissue-changes than the acute inflammations, are more likely to cause permanent obstruction to the passage of lymph. Localised attacks of inflammation, quite capable of producing this effect, may pass unnoticed by the patients unless their attention is directed to them by the discovery of tenderness or induration, for they are often unattended by pain or other prominent discomfort. The hypothesis of inflammation is peculiarly applicable to the cases of multiple cysts, such as the third of those above recorded; for there the tissues between and around the cysts were indurated and partially infiltrated by leucocytes.

These cysts contain fluid which may vary in its physical characters like that in the glandular cysts, from a perfectly clear, yellowish, serous limpid, to a turbid, brownish, mucoid fluid. Birkett says that the fluid is always alkaline and non-albuminous. I am not able either to confirm or to deny this statement, for the opportunity of an analysis has not occurred to me for several years, not because I have not seen any cysts of connective-tissue origin, but because the fluid has in every case been lost. If his observation be true, there is a great difference in this respect between the contents of these cysts and of the glandular cysts, which are often, if not always, albuminous. I am hardly disposed to accept Birkett's statement without reserve, since the analyses on which it is founded are very few, and analogy would lead us to expect that the contents of those of the cysts which are lymphatic would contain albuminous fluid. The fluid contained in some of the congenital cysts, which are claimed to be lymphatic, is albuminous; the fluid in hydroceles, which are also regarded as lymphatic cysts, is loaded with albumen. The matter is one which only can be determined by numerous analyses, and it is useless to discuss it further at present. Intra-cystic growths rarely, if ever, occur; the inner surface of the cavities is usually quite smooth. The endothelial lining may be demonstrated in perfectly fresh specimens by the nitrate of silver staining.

The patients in the cases which I have seen and collected were, without exception, over forty years of age, and the oldest of them was sixty-six. Some of them were married, some were single; but in no instance was the disease attributed to pregnancy, or to the bearing or suckling of children.

The cysts, whether single or multiple, seldom attained a large size; most of them are described as about the size of a pigeon's egg, and the largest was not larger than a small orange. Yet the duration of the disease was two years in one case, and five years in another. It is, however, right to say that most of the tumours were operated on when they had been noticed a few weeks, or at most six months, generally because they were believed to be cancerous. Although the fluid is usually tightly enclosed in the capsule, they are not generally very painful; indeed, absolute freedom from pain was noted in the majority of instances.

It need scarcely be stated that the diagnosis of connective-tissue cysts from carcinoma is often exceedingly difficult; the cases which have been related are sufficient proof of this. When the cyst is single, of large size, situated in a small breast, and not too deeply placed, it is usually easy to detect fluctuation; but when the cysts are multiple and small, and surrounded by, or embedded in, indurated tissue, or when there is a single cyst, very tense, deeply situated in the substance of a large fat breast, it is, I believe, impossible to be certain of the nature of the disease. The suspicion that it is not carinoma must rest on the absence of several of the lesser signs of carcinoma of the breast, such signs as retractation of the nipple, adherence of the skin, enlargement of the glands.

If the tumour is believed to be a carcinoma, operation wil probably be urged, and as probably accepted, on account of the absence of unfavourable characters in the disease, and the consequent hope that an operation may afford permanent relief. But in all cases where the diagnosis admits of the possibility of a mistake, the rule is imperative—to incise the growth before removing it. I have shown how this precaution saved two of the three patients whose cases have been mentioned from mutilation and a serious operation. Breasts which contain many cysts and a large quantity of indurated tissue certainly require amputation: the error of diagnosis is therefore of little moment. But the single cysts and the multiple cysts which are close together may be treated quite successfully by simply removing them through a single incision with very little interference with the mammary gland, and with the smallest risk to the patient. Nay, removal of the single cysts, though usually practised, is not in all cases necessary. It suffices for complete cure to puncture the cyst, evacuate the contents, and plug the cavity with a strip of lint, so as to ensure its healing from the bottom. In a few instances, cysts, apparently of the nature of those of which this paper treats, have been injected with tincture of iodine, and the result has been satisfactory.

I confess that my inclination is towards the milder measures in the treatment of the connective-tissue cysts, and for these reasons: the disease is not destructive or likely quickly to increase, or productive of much pain and inconvenience. I prefer, therefore, to puncture and drain the cavity rather than to remove the wall; and to remove a limited portion of the breast for multiple cysts which are limited in extent rather than to amputate the breast. I have now under my care in the out-patient room a woman, forty-six years old, with a scar two inches long in each breast, the result, she says, of the removal of cysts seven years and two years ago. She has at the present time two small cysts in each breast, not in the immediate vicinity of the old scars or in any respect a recurrence of the former disease. To spare this woman the distress of a set operation and a more or less prolonged sojourn in the hospital, I have punctured the largest of the tumours and introduced into the cavity a strip of gutta-percha tissue. If the result is satisfactory in the first, I shall repeat it for the other cysts, and the woman will not be confined to bed or prevented from following her ordinary pursuits. I cannot, of course, aver that the cysts in this woman's breasts are connective-tissue cysts, but I hope they are so, for I think they are much more likely to be obliterated than if they are lined with epithelium.

The glandular cysts and the cysts which have been just described are the only cysts of the female breast which frequently occur, unless in association with solid tumours. Milk cysts are not common, and bursal cavities behind large breasts, and cysts due to the presence of parasites, are still more rare. It is to be noted of all the cysts which are frequently met with that they are diseases essentially of women over forty years of age; for, though they occur in women between thirty and forty, and even in women under thirty years, this is the exception. It is very difficult to perceive the reason for this tendency to affect women more advanced in life, women who, for the most part, may be assumed to have ceased to use their breasts for suckling, and who therefore are very little liable to the diseases which affect younger women, milk-cysts, acute inflammations, and abscesses. The explanation probably lies in the fact that all cysts, except the milk and parasitic cysts, are due to degenerative or chronic inflammatory changes in the breast, and to the shrinking of fibrous tissues with which these changes are usually associated. This explanation receives support from the large number of instances in which cysts are found developed in the breasts of women between the ages of forty and fifty years. The few cases of cysts which occur in younger persons may be attributed to inflammation or to the action of some rare and accidental cause.

Both the glandular and the connective-tissue cysts may be attributed to the activity of the glandular epithelium, which is still capable of being easily excited, though rarely to the production of milk. In the first case the secretion is retained in the interior of the glandular apparatus, and can find no exit from it; in the second case the fluid is filtered into the surrounding tissues with the intention of passing into the vessels, and is there intercepted owing to occlusion of the lymphatic vascular system.

Queen Anne-street, W.

VETERINARY SURGEONS.—The forty-first annual report of the Council of the Royal College of Veterinary Surgeons for the year 1883-84 states that: "No fewer than 103 students from the respective veterinary schools have received the diploma of the Royal College of Veterinary Surgeons, a larger number than has been registered for some years past. By the same period next year, and judging from the numbers now studying at the various schools, there will be a still larger number."

CASE OF EXTIRPATION OF THE LARYNX.

BY SURG.-MAJOR K. M'LEOD, M.D., &c.,
PROFESSOR OF SURGERY IN THE CALCUTTA MEDICAL COLLEGE.

CHANDRA KANTA DAS, a native of Senhati, Bengal, aged forty years, was admitted into the first surgeon's ward on the 13th of September, 1883, suffering from aphonia and dyspnœa and a tumour of the pharynx implicating the larynx. His troubles commenced about a year before his admission, when he was attacked with sore-throat. A painful swelling was noticed at this time, which prevented the swallowing of food; but in a few days a discharge of blood and matter took place, and the swelling and dysphagia disappeared. Some pain however remained, and in about two months he began to bring up small quantities of blood occasionally. A month after this he got an attack of fever, and at this period, about nine months before his admission, he lost his voice. He also began to experience shooting pain behind the right ear; this interfered with his sleep, and he resorted to opium, consuming habitually about three grains of the crude drug. He was under observation for a fortnight in the second physician's ward before his admission into the surgical ward. On admission he was found to suffer from complete loss of voice, being able to talk only in a hoarse whisper. He suffered from considerable difficulty in breathing, and was subject to violent spasmodic fits of cough, resulting in the expectoration of bloody mucus mixed with small quantities of pus. He could open his mouth wide, and on inspecting his pharynx a tumour could be seen on the right side of the faucial aperture, just below the tonsil. It was about the size of a walnut, very vascular and papillated on the surface. It felt hard, and on introducing the finger the tumour was found to implicate the glottis, the right fold of which felt tuberculated and thickened. The epiglottis was apparently healthy, considerable thickening existed on the right side of the larynx as far down as the cricoid cartilage, but none on the left. The thyroid body was apparently healthy. The box of the larynx moved freely up and down during the act of deglutition, and could also be moved from side to side on the deep tissues of the neck. An enlarged and indurated gland was felt deeply beneath the sterno-mastoid. The patient was somewhat emaciated and anæmic. He digested his food well however; he underwent a thorough examination, and the heart, lungs, liver, and spleen were found healthy, and the urine free from albumen. His bowels were regular and evacuations healthy. The disease was diagnosed to be epithelioma, and as its complete removal (including the diseased gland) was considered practicable, and his general health was fairly good, the propriety of extirpating the disease was explained to him, and his consent obtained. He was kept under observation for six days, during which nothing was observed to contra-indicate the operation. He had no fever, he slept well, consumed a moderately liberal diet, and digested it well.

On Sept. 19th his temperature being 99·6° F., he was put on the table and brought under the influence of chloroform, to which he succumbed readily. An incision was made in the middle line of the neck in front from below the chin to within half an inch of the inter-clavicular notch. The muscles were exposed and the sterno-hyoids and omohyoids pulled aside, the thyro-hyoids divided close to their thyroideal origin. The larynx was carefully isolated on both sides, and during this process some small vessels had to be tied. The thyroid gland looked healthy, and it was accordingly decided not to remove it. The windpipe was now divided through the cricoid cartilage, and the divided end pulled forward by a stout double silken thread passed through its anterior margin. Breathing and chloroforming were henceforward carried on through the tracheal opening. Some embarrassment of respiration occurred at the moment of dividing the windpipe, owing to a little blood entering it; but this difficulty was very temporary. The larynx was then rapidly dissected off the pharynx by means of a pair of blunt-pointed scissors, its attachments to the hyoid, tongue, and fauces divided, and the organ removed with the epiglottis, which was thickening at the base. It was then found that the pharynx had undergone considerable infiltration, and that the right lobe of the thyroid was adherent to a mass of cancerous tissue lying to the right of the tube passing under the posterior pharyngeal wall. The mass also implicated the fauces on the right side as far up as the tonsil. The carotid artery could be felt pulsating just outside of this mass. A very careful and tedious dissection was necessary to remove this mass. Preliminary ligation of tissue likely to contain vessels was resorted to, and the scissors used to divide the parts as far beyond the limit of manifest disease as possible. Finally the chain of an écraseur was passed round the attachments of the mass, which was thus severed and taken away.

The indurated gland was then sought for, isolated and removed. A few bleeding points required tying, but the amount of blood lost was not large. The operation occupied about an hour and a half. Directions were given for carefully watching the patient, keeping the wound free of accumulated blood and secretions, and feeding him periodically with nutrient enemata and with milk and beef-tea alternately by means of an elastic catheter passed into the œsophagus. No dressing was applied except a layer of carbolic gauze to prevent access of dust, &c. A tracheotomy tube to be used at feeding times, but not worn habitually. The tumour was examined after removal, with the following result. The interior of the larynx was healthy. The disease had grown from the pharynx, had involved the root of the epiglottis, and the right aryteno-epiglottidean fold, and spread along the whole surface of the right ala of the thyroid cartilage externally. The pharynx was extensively implicated on the right side, and the tissue lying between it, and the longus colli muscle as far down as the right lobe of the thyroid body, which was adherent to the mass. A microscopic examination of the tumour was made by Dr. D. D. Cunningham, with the following result: "Tissue of embryonic character, consisting in great part merely of fusiform cells, the cells extremely abundant, and in many cases polynucleated; forms various."

The operation was followed by some shock, succeeded by mild reaction, the evening temperature of the first day being 100·6°. No bleeding of any consequence occurred. The enemata were not retained, and caused the passing of frequent stools. Food was administered by the œsophagus for the first time at 3 P.M., and continued regularly at intervals after that; the patient had a short sleep in the early part of the night. On the second day (20th) his temperature rose to 102·2°; his pulse averaged about 120, and was very feeble; respiration about 28; bowels continued irritable; feeding by the œsophagus was carried out easily and regularly, beef-tea and milk being injected alternately, a pint at a time. He was rather restless during the day; a hypodermic injection of twenty minims of solution of hydrochlorate of morphia was administered at 8 P.M. He slept well throughout the night. On the third day (21st) his temperature rose from 101° in the morning to 102·6° in the evening; pulse 120; respiration 33. The lips of the wound were somewhat œdematous, and its cavity filled with a mixture of mucus, blood, and lymph. This was continually removed by swabbing. Bowels continued irritable, motions somewhat loose. He lay mostly on the right side, but occasionally on the left, and breathed without any difficulty; no cough; hypodermic injection repeated; feeding as before; milk to be diluted with an equal quantity of barley-water and ten grains of bicarbonate of soda added to delay coagulation, as some curd was observed in his stools. On the fourth day (22nd) he seemed to be improving; temperature from 101° to 102°; pulse 108 to 112; respiration 24; slept well; bowels quieter; discharge fetid; glycerine of borax to be applied to the surface of the wound; lungs examined physically; no consolidation; a few sibili and rhonchi audible; hypodermic injection repeated. On the morning of the fifth day (23rd) the temperature was 100·6°; pulse 114; respiration 24. He had slept well and seemed to be progressing satisfactorily. A little bleeding had taken place at 2.30 A.M., but it stopped without treatment. He went on favourably till 2.50 P.M., when, during the operation of feeding, the wound suddenly filled with receding blood. The wound was as quickly as possible cleared of blood by the officer on duty, and pressure and ice applied, but before more efficient aid arrived the patient died. The bleeding seemed to come from the right side high up. A post-mortem examination was not allowed.

Such are the details of this unfortunate case. This is the second occasion on which I have performed the operation. The first case, which I published in THE LANCET of Sept. 15th, 1883, may be considered a successful one. For though the man died of phthisis five months and a half after the operation, he lived long enough for the wound to cicatrise,

and with the aid of certain contrivances, which I described and figured, for him to swallow food naturally and to speak audibly. The fatality in the present case may be looked upon as the result of an accident that may occur after any operation rather than as a consequence of this particular proceeding. Indeed, the man, up to the time of the occurrence of the bleeding, seemed to be doing well, and I entertained sanguine hopes of success. Still it cannot be denied that the operation is a very difficult and severe one, that it entails very great suffering and discomfort for some time after, and that, even if recovery takes place, it leaves the patient in a sad plight, crippled very materially with regard to two most important functions—namely, swallowing and speech. If, however, a terrible disease can be extirpated and life prolonged, temporary suffering and permanent discomfort are small matters as compared with certain death. A considerable mass of experience has now been gained regarding this operation, and we are in a position to estimate, with considerable accuracy, the risk to life which it entails and the probability of survival which it confers, also the chances of recurrence of the disease. We can also set against this experience what we know of the course of laryngeal cancer when treated by palliatives, including tracheotomy. The question which presses itself upon our attention therefore is, Is it best to treat such cases with palliatives, or subject them to this operation? Dr. J. Solis Cohen, Honorary Professor of Laryngology in Jefferson Medical College, has recently published a paper on this subject in the Transactions of the College of Physicians of Philadelphia, in which he gives tabular details of sixty-five cases of excision of the larynx, all in fact that had been published up to the date of his paper (April 4th of last year), including my own first case. The present case adds one to the number, which is now sixty-six. Of these sixty-six operations, four were performed for non-malignant disease, cicatricial syphilitic stenosis, necroses of larynx, polypi, and papilloma. Two of these died and two recovered. Five operations were performed for sarcoma. Of these, one lived seven months, one fifteen months, and one seventeen months and a half. Of the remaining two, one was alive two years and the other six years and a half after the operation. This leaves a balance of fifty-seven operations for cancers. Of these fifty-seven, seventeen (or 29 per cent.) died within seven days; five (9 per cent.) from eight to fourteen; two (3 per cent.) from fifteen to thirty days; ten (18 per cent.) between one month and five months; six (10 per cent.) between six and twelve months; and one over twelve months. In addition to these, recurrence was reported in two cases at three and seven months. These may be fairly added to the fatal cases. Thus, out of the fifty-seven cases, forty-three (75 per cent.) are reported to have died, and the remaining fourteen cases were reported alive at periods varying from five weeks to two years. The causes of death in the earlier periods were collapse, pneumonia, and other lung affections; in the later periods, mainly recurrence of the disease. It thus appears that the recorded mortality amounted to three-quarters of the whole number, while in the remaining fourth it is an open question whether the operation conferred a permanent immunity from the disease or materially prolonged life. Dr. Cohen estimates the duration of life in a case of carcinoma of the larynx treated by tracheotomy two years and a half after first detection, the tracheotomy becoming necessary at from nine to eighteen months. He gives cases of his own which lived for six, seven, thirteen, and eighteen months after tracheotomy. He reasons that on the whole palliative treatment confers the greatest good on the greatest number by giving a longer average after life. He is also of opinion that the condition of a patient after tracheotomy is more comfortable than after excision, even if an artificial larynx is supplied. These conclusions appear to me to be supported by the experience which he cites, and I would hesitate to repeat the operation in a case of cancer, though in a case of a sarcoma or innocent tumour the evidence is not sufficiently large and strong to justify a decided opinion for or against.

OVERHEAD TELEGRAPH AND TELEPHONE WIRES.—It is stated that the Government have decided to ask for the appointment of a Select Committee of the House of Commons to examine into and report upon the whole subject of overhead telegraph and telephone wires. It is believed that this step has been taken at the instance of the Post Office authorities.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullaautem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

PAPILLOMA OF THE MALE BLADDER; REMOVAL THROUGH A PERINEAL INCISION AFTER LIGATURING THE BASE OF THE TUMOUR; RECOVERY; REMARKS.

(Under the care of Mr. HENRY MORRIS.)

FOR the following notes we are indebted to Mr. S. Peake, the dresser.

E. L——, aged forty-seven, a labourer, was admitted on January 21st, 1884. Two years ago he was in the hospital under the care of Mr. Morris, who removed a large prostatic calculus by median perineal incision. For twelve months after the operation the patient was very comfortable; he then began to have slight weakness in his bladder and occasional incontinence, with obscure pains about the region of the pubes. His symptoms in time became more aggravated, especially the incontinence, and for this cause he resorted to the use of a urinal. His urine became thick and ropy, and occasionally dark coloured from admixture with blood. For six weeks previous to admission his urine contained constantly more or less blood. He had had no retention or interruption of the stream.

State on admission.—He is a tall, healthy-looking, well developed, muscular man, and complains of inability to hold his water, and slight pain on micturition. Urine, sp. gr. 1019, acid, thick, ropy, and contains a large quantity of pus but no blood. A sound passed along the urethra and into the bladder easily, but no stone could be detected.

Family history.—His father died, aged fifty, of cholera. His mother died suddenly, aged fifty-one, and at the necropsy calculi were found in the bladder. An uncle on the mother's side has twice had stone removed from the bladder. Other members of the family healthy. On Jan. 23rd the urine contained a small quantity of blood.

Operation.—An anæsthetic was administered and the patient put up in the lithotomy position for the purpose of examining the prostate and bladder. Mr. Morris, after the introduction of a straight grooved staff along the urethra, opened up the old cicatrix in the median line of the perineum. He passed a sound through the opening into the bladder, but could not detect a calculus. He next introduced his finger into the wound, and not finding anything wrong with the prostate, with gentle pressure passed it into the bladder. On the upper wall of the bladder, a little to the right side, he could feel a soft fringy growth, covering an area of about the size of a crown piece; it was perfectly mobile, and did not infiltrate the walls of the bladder. Parts of this growth Mr. Morris seized with long, straight forceps, but not having proper crushing or cutting forceps at hand he did not attempt its removal. An indiarubber tube was introduced into the bladder through the wound for the purpose of keeping the bladder empty, and was fastened in the usual manner.

Jan. 24th.—Great difficulty has been experienced in keeping the tube in the bladder, it having been forced out two or three times since the operation. The patient has not suffered much pain, and has passed a comfortable night. There has been a great deal of hæmorrhage from the bladder, and half-drachm doses of the liquid extract of ergot were ordered every four hours.

25th.—An anæsthetic was again administered, and the patient was placed in the lithotomy position, for the purpose of removing the growth from the bladder. Mr. Morris, when about to introduce his finger into the opening in the perineum, found that the tumour was prolapsed into the wound; this greatly facilitated its removal. Having stretched the edges of the wound apart by deep-bladed retractors, and drawn the tumour out of the wound by means of torso-pressure forceps, the growth was ligatured at the base with a catgut ligature, and cut off with scissors; some short sessile portions of the growth were then scraped off with the finger-nail. The bladder was irrigated with Condy's fluid, and a quantity of

small pieces of the growth was thus washed out. The indiarubber tube was introduced as before.

26th.—There has been a great deal of hæmorrhage from the bladder. The fluid which was passed looked as if it consisted of nearly pure blood. Drachm-doses of the liquid extract of ergot were given every four hours, and after three doses the hæmorrhage nearly ceased; half-drachm doses were then administered, but were discontinued on the 27th, as the hæmorrhage had entirely ceased.

28th.—The patient feels quite comfortable, but somewhat weak. The urine is thick, ropy, and about one-eighth pus.

Feb. 2nd.—Mr. Morris made a digital examination of the bladder, the patient being under the influence of an anæsthetic, and found that the ligature had disappeared and that the parts were healthy. The tube was ordered to be discontinued.—6th: Patient has improved in health and appearance, and expresses himself as quite well. Most of the urine passes through the penis and the patient has complete control over the vesical sphincter, although he experiences some frequency of micturition, about every four hours during the day, rather more frequently at night. The urine is still thick and ropy, and contains about one-eighth of pus. Bladder ordered to be washed out daily through a large-sized gum-elastic catheter (No. 11 was used) with Condy's fluid, and a mixture containing quinine, citrate of potash, tincture of hyoscyamus and mucilage to be taken three times a day. Wound in the perineum looks quiet and healthy.—13th: Urine does not contain more than one-twentieth of pus, is much less viscid and ropy. Irrigation of bladder continued. Fistula in perineum touched with nitrate of silver. A little urine still continues to pass through it. Patient allowed to get up on the 18th.—21st: Patient having taken a slight chill, it was noticed that the pus in the urine had greatly increased. Irrigation of bladder continued. Fistula nearly healed.—26th: Urine contains hardly any pus. Fistula quite healed. Left hospital for convalescent home.

March 21st.—Came to hospital, after spending three weeks at seaside, and states that he feels perfectly well and is quite relieved of all his former troubles.

The tumour removed was about three-quarters of an ounce in weight, and its microscopical characters were similar to those of an ordinary villous growth of the bladder. Mr. Karop, who examined it, reports: "It consists of thin folded lamellæ of almost structureless membrane, richly covered by transitional epithelium, and containing large vessels with only the barest trace of a proper wall."

Remarks.—The case is of great interest, chiefly as suggesting the occasional advantage, when dealing with bladder tumours, of separating the stages of the operation—namely, of opening the bladder and waiting for the expulsive efforts of the contracted bladder to expel the free extremity of the growth through the wound, then after a day or two to complete the removal in the manner adopted in this case. Such a course, when practicable, is more safe and more accurate than crushing off the growth with the lithotrite or Thompson's forceps. When the tumour is of the papillomatous character, it is probable that in no inconsiderable proportion of cases its expulsion may be looked for. In the female bladder the free ends of papillomatous growths are often floated outwards to and beyond the external urinary meatus. The previous formation and removal of a prostatic calculus supports the theory referred to by Sir Henry Thompson, "that papilloma may sometimes arise from local sources of irritation affecting a mucous membrane."[1]

LEICESTER INFIRMARY.

EPITHELIOMA OF THE PENIS REMOVED BY PEARCE GOULD'S OPERATION.

(Under the care of Mr. J. ST. THOMAS CLARKE.)

FOR the following notes we are indebted to Mr. Bryan, dresser.

David K——, aged forty-eight, a stout man and a framesmith, presented himself for admission on Oct. 2nd, 1883, suffering from a swollen penis, tight phimosis, occasional free hæmorrhage, and foul sanious discharge from under the constricted prepuce. Some slight induration was found in the inguinal glands. Though the man denied any syphilitic history, he was put on anti-syphilitic remedies for a few days. As no improvement resulted, he was examined under ether, and the prepuce slit up on Oct. 10th, when a large foul ulcer of an apparently epitheliomatous character was discovered, involving great part of the dorsum of the glans, with extreme hardness and widening as it were of the corpora cavernosa. The corpus spongiosum beyond the glans seemed in the main affected. It was ascertained that the patient had always had phimosis. Two years ago he first noticed a slight discharge from the end of the penis. This caused him no inconvenience. Six months later while micturating he noticed that he passed some blood. After that he bled profusely at irregular intervals, and independently of micturition. He had been a strong healthy man, but his health was now much below par, and he looked ill. As the question of removing the penis at the root by the old operation had not been mentioned to him, nothing further was done on this occasion. The parts were dressed with carbolic lotion, and the necessity of removal of the organ was afterwards pointed out to the man, though the result was stated to be unpromising. This was because the infiltration of the corpora cavernosa so markedly extended to the whole length of the penis. The man declined the operation, so, after a few weeks' sojourn till the parts assumed a chronic condition, free from inflammatory action, which had been most persistent since the slitting up, he left the hospital. Mr. Bond, the house-surgeon, about this time drew attention to the operation performed by Mr. Pearce Gould of the Westminster Hospital in a similar case,[1] which had proved a success, and which consisted of extirpation of the penis at the roots of the corpora cavernosa at their attachment to the rami of the ischium, and fixing the urethra to the perineum. As the man came again on Nov. 27th for further examination, Mr. Clarke proposed this operation to him as the only method of dealing satisfactorily with his disease, and he now gave a ready assent to it.

On Nov. 29th the patient was put under ether and placed in the lithotomy position. As recommended, the scrotum was first divided into its two halves along the line of the raphe from the root of the penis to the perineum, the dissection going right down to the corpus spongiosum, in which a full-sized catheter had been placed. The catheter was now pushed as far as the triangular ligament, the corpus spongiosum pulled forwards and cautiously separated by dissection or manipulation from the body of the penis. The catheter being drawn out, the corpus spongiosum was cut across and its deeper portion detached as far as the triangular ligament. Next the incision and dissection round the upper part of the root of the penis was effected, the suspensory ligament cut through, and the penis wholly detached except at the crura. The bleeding at this stage had become rather troublesome. The two crura were now attacked in succession by a periosteum elevator and the knife, but from their depth gave considerable trouble and hard work to get them away; while the hæmorrhage was very difficult to arrest, some deep arteries, probably those of the corpora cavernosa, being only secured after much patience. The attachment of the crura to the inner margin of the rami made their removal more complicated, and there seemed no little risk of the knife slipping and perforating the deep parts of the pelvis. The organ being now wholly removed, attention was turned to the corpus spongiosum. This was found unfortunately to have a widish rent in it, probably done by a retractor during the deep dissection, for great care had been taken to avoid any injury to it by keeping the point of the knife always away from it. The laceration being on the upper surface, it was stitched together as well as possible, and the end of the corpus spongiosum slit up for about half an inch, and the edges of this cut were sewn to the back part of the skin wound immediately behind the scrotum. The two halves of the scrotum were now brought together and stitched up, a drainage-tube being placed in the deep part, and the ends brought out in this case above and below. A soft catheter was left in the urethra as far as it would go, though it did not apparently enter the bladder. Had it not been for the laceration no catheter would have been required. The patient rallied fairly from the shock of the operation. His temperature in the evening was 101°, next three days about 102°, then 101°, 103°, and variations for fourteen days, when it fell below 100°. Recurrent hæmorrhage took place on the day after the operation, and the lower part of the wound had to be reopened and the bleeding stopped by compression by small steel clips, which were removed on the following day. The catheter was

[1] Med. Chir. Trans., vol. lxvi., p. 363.

[1] Vide THE LANCET, May 20th, 1882.

used for three or four days; but, difficulty arising in its introduction, it had to be discontinued, and the man passed his urine as well as he could through the lowest part of the wound. The upper and front part of the wound healed readily, but there was great œdema of the scrotum for a fortnight, and the lower part of the wound adjoining the urethra sloughed. On the ninth day he had a rigor and the next day more hæmorrhage, so he was put under ether and re-examined, and a large slough, probably the torn end of the urethra, removed. After the removal of this slough the parts soon improved, and the patient went on gradually to convalescence and complete healing of the wound. This was greatly promoted by the assiduity of Mr. Bond, the house-surgeon, throughout the case. At this date the patient passes a good stream of water through his perineum, the opening being free from any inflammation, and about the size of a pea. He has gained flesh to a marked degree, and is now, thirteen weeks since the operation, quite well. The hardness in the inguinal glands is really not so marked as it was, and the improvement in the general health seems to indicate the absence of implication in the pelvic or lumbar glands. The sloughing of the urethra, following the laceration, has not so far led to stricture or other bad result. The patient's scrotum has a long median cicatrix corresponding to the raphe. He was exhibited at the Leicester Medical Society at the beginning of March.

Of the great value of the operation in removing epithelioma of the penis there can be no doubt, and Mr. Pearce Gould is to be congratulated on what appears to be a real advance in the surgery of this organ for extirpating that disease.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Increase of Cancer in England and Wales.—Epiphysitis.

THE ordinary meeting of this Society was held on Tuesday last, Dr. George Johnson, F.R.S., President, in the chair. Mr. Macnamara's paper received keen criticism.

Mr. F. B. JESSETT read a paper entitled an Inquiry into the Cause of the Increase of Cancer in England and Wales. The author regards the increased death-rate from cancer, to which attention has been drawn by the Registrar-General in his last annual report, as signifying a positive increase in the prevalence of cancer, rather than as being open to explanation on the ground of greater accuracy of diagnosis, as suggested in the report. On examination of the statistics for ten years, the increase is found to be from 9·945 deaths registered in 1872 to 13·542 deaths in 1881, or, taking the death-rate, from 431 per 1,000,000 in 1872 to 520 in 1881. On analysis of the Registrar's returns for the different counties, the death-rate from cancer in the fen districts is seen to be much higher than elsewhere, with the exception of London, Devon, Somerset, Gloucester, and North Wales, which places the author would exclude from account on special grounds. Cancer is more rife in low-lying, damp situations; but heredity, increased by intermarriage, has probably much to say to its prevalence in the "cancer district," the fen counties above alluded to. The increasing mental strain in the struggle for existence may tend to account for the increased development of cancer among persons predisposed, and these points must be borne in mind in advising those predisposed to the disease.—Dr. HERBERT SNOW could not entirely agree with Mr. Jessett; he thought that the Registrar-General's statistics on cancer were thoroughly vitiated from their having mixed up all cases of malignant disease as cancer. He considered that nervous influences were definitely at work in its production. Out of fifty-two ordinary patients, a family history of cancer was present in fourteen, or one in four. Cancer was a purely local disease. Heredity played but little part in its causation.—Mr. HARRISON CRIPPS referred to the falsity of the statistics obtained from the Registrar-General's reports. The hereditary nature of cancer was based upon evidence derived from two sources: 1. That it is a matter of common notoriety that cancer runs in certain families. 2. Evidence founded upon certain statistical facts. The former class of evidence was hardly admissible from a scientific point of view. In regard to the second sort of evidence, it must be remarked that it was impossible to understand how a man could inherit cancer from his uncles, aunts, or cousins; the necessity for excluding these was obvious. Further, the impossibility of knowing the number of these distant relatives, in order to form a table of comparison between a cancerous and a non-cancerous family, renders them useless for the present purpose. This objection cannot apply to a man's parents or grandparents; two of the former and four of the latter must be the invariable amount. An individual rarely knew the cause of death of his four grandparents. Out of 916 parents cancer occurred thirty times in the mother and seven times in the father, or a total of thirty-seven times. This gives one parent in every 24·8 who died from cancer. But a person has two parents, therefore the chance will be only that 12·4 that one of them died of the disease. These figures of Mr. Morrant Baker's table of Sir James Paget's cases were next compared with those derived from the register of St. Bartholomew's Hospital. From this source it appeared that there is a chance of 14 to 1 against a cancerous patient having a cancerous parent. Now, these statistics did not prove in any way the inheritance of cancer, and this question could only be answered by discovering the proportion of cancerous relatives belonging to those not cancerous. When the death-rate from cancer in the parents of cancer patients was compared with the death-rate from cancer in all persons in the kingdom dying above the age of twenty years it came out thus: In the ten years 1861 to 1870 in England and Wales 1,185,189 men died above the age of twenty years and 1,194,433 women; 24,845 men died of cancer and 56,854 women. Thus 81,699 deaths from cancer occurred out of 2,379,622, or one death in every 29·1, from cancer. By comparing these figures with those previously given, it was clear that amongst the parents of cancerous patients the death-rate from cancer was 1 in 24·8 (Paget), 1 in 28 (Cripps), and amongst the whole community over twenty years of age 1 in 29. The relative frequency of cancer in these sets differed so slightly that it might be regarded as accidental; so that it would seem that cancer in the parent in no way increased the liability of the offspring to suffer from the same disease.—Mr. JESSETT, in reply, still considered there was something in heredity as a cause of cancer. The presence of hospitals in towns situated on rivers which overflowed their banks probably explained the increase of cancer in towns having this situation. It was incomprehensible to him how cancer could arise spontaneously; mental worry might be a cause of the disease.

Mr. MACNAMARA read a paper on Epiphysitis. Syn.: Diffuse ostitis of children; osteo-myelitis during period of growth; suppurative periostitis; acute necrosis. This disease, fully described by M. Gosselin in the *Arch. Gén. de Méd.* for 1858, hardly recognised by English authorities, seems to exist independently of acute osteo-myelitis. In this paper epiphysitis of the tibia is alone referred to, and the author brings forward five cases of the disease in that bone, illustrating the various phases of the malady, and showing that it may run its course (*a*) without affecting either the ankle- or knee-joint; (*b*) that it may give rise: (1) to necrosis of the entire diaphysis, (2) to abscess of the bone, (3) to diffuse sclerosis and enlargement of the tibia. The disease consists in inflammation commencing at the line of junction of the diaphysis and epiphysial cartilage. From this line the inflammatory action extends along the soft structures contained in the cancellated tissue and Haversian system of the diaphysis, involving the contents of the medullary canal and the deep layers of the periosteum. In many cases the inflammatory action quickly leads to suppuration or to necrosis of the diaphysis; the diaphysis of the bone may thus be entirely destroyed without the epiphysis and neighbouring joints being affected. If arthritis occur, it is a secondary affection. Epiphysitis does not always lead to necrosis of the diaphysis. Early treatment often saves the bone, and the active changes in the bone may subside. If abscess be formed in the cancellated tissue of the bone, the surrounding osseous tissue undergoes a condensing ostitis. In other cases the inflamed diaphysis becomes simply sclerosed with increased periosteal growth. Symptoms: Two of the five cases brought forward were at first mistaken for articular rheumatism. The disease commences with great pain and swelling in the proximity of a joint and general pyrexia. The limb becomes much swollen and of a brawny hardness, abscesses form, and in many cases the necrosed diaphysis can be felt. Symptoms of septicæmia often follow. In other cases the disease subsides, and ultimately signs of local abscess or of diffuse

sclerosis manifest themselves. Treatment: In the early stages of the disease, free incision down to the extremity of the affected diaphysis, and drainage of the part. In severe cases, trephining the bone at one or more places. When the greater part of the diaphysis is necrosed it must be removed, dissecting the periosteum from it. A new tibia will often form. Should the tibia not re-form, the fibula will increase in size, and with proper appliances will form a very serviceable limb.—Mr. TIMOTHY HOLMES dissented almost entirely from the author. The name of epiphysitis was inaccurate, even if we allowed the term as meaning an inflammation of the epiphysial cartilage. If this cartilage had been destroyed it was difficult to understand how the bone was reproduced and the limb grew. Gosselin had described the disease, and Chassaignac had used the term periosteal abscess, or acute periostis, and Mr. Holmes preferred that term. Acute arthritis of infants, by Thomas Smith, and epiphysitis, by Mr. A. E. Barker, were terms applied to a disease of an altogether different character. In his opinion the disease described by Mr. Macnamara began in the great majority of cases in the subperiosteal tissue, or possibly sometimes in the medulla of bones; but as a rule the medullary tissue was affected secondarily.—Mr. BARWELL thought that Mr. Holmes' objection to the name of the paper was well founded. A pathological specimen was shown in which disease had begun in the epiphysis of the femur and had spread to the shaft. When the medulla was much inflamed, in the pus from beneath the periosteum much oil would be found, and in such cases trephining or perforation of the bone shaft was recommended. In 1860 he had described epiphysitis as distinct from diaphysitis. When the bone was not reproduced after the removal of the shaft, he had once attempted to separate the layers of the periosteum which had fallen together, but without success; years later, however, a new bone (tibia) re-formed.—Mr. THOMAS SMITH also could not concur with the views of Mr. Macnamara. Some years ago he had written on the subject under the title of "Acute Necrosis of Growing Bones." Mr. Macnamara had swept into his net osteo-myelitis, chronic abscess, acute necrosis, chronic osteitis, and acute periostitis. He asked whether there were any secondary abscesses or pericarditis in these cases, whether pyæmia or septicæmia was associated with them. It did not follow that all the bone would die in a case of acute periostitis. After the removal of the whole of a long bone the skin, periosteum, and bone grew together, and there was danger of ulceration all along the surface of the bone. He had removed the whole tibia from a boy several years ago, and had actually been requested by the boy, now a man, to remove the lower limb on account of the ugliness of the ulceration in point.—Mr. GANT spoke of the want of correlation between the pathology, symptoms, and treatment of the disease, as illustrated by Mr. Macnamara's paper.—Mr. MACNAMARA, in reply, maintained most of his propositions. He held that if longitudinal sections of the long bones were made, acute inflammation of the medulla would be found in these cases of epiphysitis or of inflammation commencing between the epiphysis and the diaphysis. The use of the term epiphysitis was justified by the fact that the diaphysis was separated from the epiphyses. Further, it did not necessarily follow that the disease must end in death or necrosis of the whole bone. Chronic abscesses generally began at that period of life when the epiphysis had not yet blended with the diaphysis. In his cases there had been no rigors, and there were no secondary abscesses, though many joints were affected with a sero-purulent inflammation, which led to the disease being mistaken for articular rheumatism.

CLINICAL SOCIETY OF LONDON.

Perichondritis of the Larynx.—Tubercular Tumours of the Larynx.—Excision of Rectum for Cancer.—Remarkable Tubercular Meningitis.

SIR ANDREW CLARK, Bart., presided at the ordinary meeting of this Society held on the 18th inst. All the papers read were of interest, but the last two provoked most discussion.

Mr. HOWARD MARSH read an abstract of the report of the committee on Mr. Lund's case of Osteo-arthritis. The main conclusion arrived at was that the arthritic affection was probably due to changes in the central nervous system, and that the affection was allied in its nature to Charcot's joint disease. The presence of other forms of joint affection were eliminated by a process of exclusion.

Dr. DE HAVILLAND HALL'S paper was a sequel to a paper read before the Society on April 28th, 1882, entitled Primary Laryngeal Perichondritis. The subsequent course of the case showed how untrustworthy negative histories are, as the post-mortem revealed marked syphilitic lesion, so that the perichondritis was almost certainly of syphilitic origin. The patient, a man aged twenty-five, was admitted into Westminster Hospital on October 9th, 1882, wearing a tracheotomy tube, for the purpose of having his stenosed larynx dilated. The day after his admission painful swellings of the joints and in the muscles developed. These disappeared under the use of large doses of iodide of potassium and the inunction of blue ointment, but the pain and febrile disturbance prevented any treatment of the laryngeal stenosis. In the beginning of February, 1883, the patient left the hospital, free from pain but very emaciated. He was then lost sight of till July 2nd, when he was readmitted into the hospital, suffering from albuminuria and diarrhœa, and he died two days later. The necropsy showed constriction at the junction of the larynx and trachea, the aperture only admitting a No. 12 catheter; above the point of constriction the mucous membrane was normal; below, thickened, of a dark-chocolate colour, and its surface bathed by a layer of yellow pus; the right cricoid cartilage was partially absent. The liver was a marked example of the fatty and lardaceous degeneration, and there were peri-hepatic and peri-splenic adhesions. In reply to Sir Andrew Clark, Dr. DE HAVILLAND HALL said that he had arrived at no definite conclusion with regard to the nature of the joint disease.—Sir ANDREW CLARK had met with arthritic affections following slight operations in various parts of the body. It should not be concluded that a tumour was either aneurismal or syphilitic because iodide of potassium caused its subsidence. He instanced a case of cancer which was materially improved and the pain relieved by the use of large doses of iodide of potassium.—Dr. HALL, in reply, remarked how very rapidly and completely the tumours he described disappeared under iodide treatment.

Dr. PERCY KIDD read notes of a case of Tuberculous Tumours of the Larynx in a patient, aged fifty, who had suffered from cough, hoarseness, and shortness of breath for eight months. There were signs of consolidation of the upper part of the left lung, with complete absence of râles. The larynx was normal, with the exception of the vocal cords. On the posterior extremity of the left cord was a spherical tumour as large as a small pea. On the corresponding part of the right cord there was a small pinkish prominence. The pulmonary condition remained unchanged for months, scanty, obscure râles being heard occasionally, but usually were absent. There was very slight increase in size of the larygeal tumour, but the prominence on the right cord gradually assumed the same size and shape—viz., like that of a pea. Ten weeks after his first visit the patient was admitted into the hospital in consequence of a spasmodic laryngeal attack in the out-patient room, from which, however, he soon recovered. For the four months he remained in the hospital he had slight spasmodic attacks from time to time depending upon the varying degree of swelling of the ary-epiglottic folds. The tumours remained unaltered, and there was no change in the pulmonary condition. The aortic second sound was noticed to be much accentuated, and occasionally a systolic murmur was heard under the left clavicle, which was thought to be due to aortic dilatation or aneurism. The patient was discharged, the physical state of his chest and larynx being unaltered. A month later he appeared in the out-patient room with signs of excavation of the left lung, and with much swelling of the ary-epiglottic folds, but without any change in the appearance of the tumours. He was readmitted in a very weak state, and gradually became worse. The laryngeal obstruction increased so much that tracheotomy had to be performed during a spasmodic attack, but he sank two days later. The necropsy revealed pulmonary phthisis of a fibroid type in the left lung, tubercular ulceration of the posterior wall of the larynx and of the trachea, with symmetrical pea-sized tumours situated over both processus vocales; atheroma and dilatation of the aorta; granular contracted kidneys; fatty liver; tubercular ulceration of the colon. A microscopical examination of the tumours showed that they were an outgrowth from the lateral aspect of the inter-arytenoid fold, and consisted of collections of subepithelial miliary tubercules, and of a cellular

infiltration of the mucosa and submucosa. Tubercle bacilli were found in abundance in the miliary tubercles and in the cell infiltration. In the *Wiener Med. Presse*, April, 1883, Schnitzler records a case in which he diagnosed multiple tuberculous tumours of the larynx. The tumours were removed with the guillotine, and proved to consist of aggregations of miliary tubercles. Schnitzler believes that his is the first case in which such tumours have been recognised during life.—Sir ANDREW CLARK inquired whether Dr. Kidd had heard or known of a case of laryngeal tumours of non-tubercular nature when disease of the lungs of phthisical character existed.—Dr. KIDD explained that the diagnosis of phthisis was only made after the larynx had been involved.—Dr. WHIPHAM said that he had recently had a case which illustrated the appearance of tubercle in the larynx before the occurrence of physical signs in the lungs. When first examined an enlargement of the ventricular bands and swelling of one arytenoid cartilage were observed. It was not until some time later that physical signs appeared at the apex of one lung, and this coincidently with swelling of the other arytenoid cartilage.—In reply to Sir Andrew Clark, Dr. WHIPHAM said that there were no other evidences of syphilis.—Dr. DE HAVILLAND HALL spoke of the frequency with which phthisis and syphilis affected the larynx at the same time. Dr. Kidd's case was exceedingly rare and valuable. It was difficult till now to believe that a tubercular tumour could remain so long as nine months without ulceration.—Sir ANDREW CLARK suggested that the non-ulceration might be explained by the secondary production of fibroid tissue in the tubercular tumours.—Dr. KIDD had never heard of a case of tubercular tumours in the larynx prior to his own. Since his paper was written he had seen two somewhat similar ones. The fact of the persistence of tubercular tumours without ulceration for nine months was to him an extraordinary occurrence. He gave brief outlines of the other cases he had recently observed.

Mr. HARRISON CRIPPS read the notes of three cases of Cancer of the Rectum in which he had excised the lower part of the bowel, the operations having been performed respectively seventeen months, eighteen months, and four years ago. In the first case, that of a man aged sixty-eight, the symptoms had existed for two years. The disease consisted of a hard, irregular mass on the posterior and right wall of the rectum, about two-thirds of the circumference of the bowel being involved, the disease not extending more than two inches and three-quarters from the anus. The lower three inches of the bowel were removed, with the exception of about one-fourth of its circumference on the anterior wall. The patient was much troubled during his convalescence from symptoms arising from enlarged prostate, but was discharged in a satisfactory condition so far as the bowel was concerned. At the end of a twelvemonth his medical attendant wrote that he was alive and comparatively comfortable, no return of the disease could be detected, but he was unable completely to retain his fæces. Mr. Cripps had examined this patient since sending in the paper, and found that he was suffering considerably from prostatic troubles. There was some hardness in this neighbourhood, but no certain symptoms of recurrence. The second case was that of a lady, aged sixty. The disease extended all round the bowel on the anterior wall, nearly as high as four inches. Mr. Cripps did not regard the case, from its extent, as a very favourable one for operation, but at the wish of the patient undertook its removal. The bowel had to be dissected for two inches from the peritoneum. The patient made a very satisfactory recovery; she suffered much from contraction, but there was no recurrence for more than a year. The disease then recommenced. The last case was that of a lady, aged forty, who was recommended to the author by Dr. Matthews Duncan. The disease consisted of a hard ulcerated mass, involving one-half the circumference of the bowel to a height of two inches, and filling the ischio-rectal fossa. The disease was removed in July, 1880, and proved, under the microscope, to be a typical example of adenoid cancer. The patient has been frequently examined since. She has completely regained her old strength and health, has no pain or discomfort whatever, and remains, after nearly four years, perfectly free from any symptom of recurrence. Mr. Cripps remarked that he was much indebted to Mr. Butlin for his assistance in the operations performed.—Mr. MORRANT BAKER had operated on three cases of rectal cancer. One had died, and two were very greatly relieved. In one instance a large portion of the recto-vaginal septum was removed, but no great amount of discomfort seemed to be incurred by the necessary incontinence of fæces. In another case the result was very much more satisfactory in every way.—Mr. WALSHAM'S experience was also limited to three in number. The first case died three months after operation; the second case died on the third day after surgical treatment, probably from septicæmia; in the third instance the whole of the disease could not be extirpated. The patient, however, made an excellent recovery, and continued well for a time, but lately a recurrence had set in. He advised the inspection of the rectum with the patient under the influence of an anæsthetic. In the operation he preferred the scissors to the écraseur. He raised the question whether it would not be well to remove as much of the disease as possible, even though all could not be taken away.—Mr. C. T. DENT thought that removal of the disease ought to be practised if the finger could reach beyond the disease with the patient under the influence of chloroform. The influence of the contraction had to be overcome, but he considered that incontinence of fæces was generally most distressing.—Mr. BARKER spoke of a case which occurred in a man, aged fifty-six, in whom he had removed an epithelioma which affected the greater portion of the circumference of the rectal wall. Three months later, although the man said he had no difficulty in defecation, Mr. Barker found very great contraction of the rectum about one inch above the anus. Owing to a valvular arrangement, the result of the operation not having involved the whole circumference of the bowel, the discomfort from constriction was extremely slight. Recurrence of the tumour led to a second operation, which was followed by cellulitis and death. A second case also succumbed to a similar form of cellulitis. The operation was nevertheless, in his opinion, of great value, and ought to be practised.—Mr. RICKMAN GODLEE gave an outline of a case which occurred in a man aged sixty, in which a cancerous nodule existed in the posterior part of the rectum. In this case he used Paquelin's cautery, by which hæmorrhage was entirely prevented. Afterwards there was constriction of the rectum, accompanied by incontinence of fæces. Dilatation was practised, but not with complete relief of all the symptoms. In some cases it might be advisable to perform colotomy. Mention was made of a case in which repeated scraping away of the epithelioma was practised, with the effect, apparently, of prolonging life and rendering the patient more comfortable.—Sir ANDREW CLARK said it did not appear from the discussion that operation clearly prolonged life. He felt sure that carcinoma of the rectum was of much greater duration than was ordinarily supposed. He briefly related a case which had occurred in a lady under his care, and lasted six years.—Mr. CRIPPS, in reply, said that, contrary to Sir Andrew Clark's experience, he should say that the expectancy of life was not greater than a year or a year and a half. As regards after-operation, however, he mentioned one case on which he had operated eight years ago; and, notwithstanding two recurrences, which were also surgically treated, the patient was probably still alive and well. He agreed in general with Mr. Walsham's remarks that scissors were better than the cautery unless the disease extended very deeply. He considered that it was extremely important that the finger should be got well beyond the disease. The mobility of the rectum was, however, a still more important point, as showing the amount of deep extension of the disease. Contraction of the bowel was far more serious than the inconvenience of incontinence of the fæces. He would rather have any amount of incontinence to deal with than one of those intractable strictures. A free posterior division of the contraction or colotomy was the *dernier ressort* of such strictures. Verneuil had recommended the free posterior incision of rectal stricture.

Dr. ANGEL MONEY communicated a paper on a remarkable case of Tubercular Meningitis. The patient was a female infant, aged nine months, when first seen on Dec. 7th, 1883. It appeared that the child had enjoyed good health till about five months previously, when it had the measles, but apparently recovered completely in a short space of time. On Nov. 27th the child had a fit, shortly after which the left arm and leg were found to be completely paralysed. The intelligence was, so far as could be judged, unaffected. The corporeal state was decidedly one of great fatness. The condition of hemiplegia seemed to be slowly passing away, until Dec. 27th, when a series of fits set in, unconsciousness supervened, and the patient died on Jan. 2nd. On Jan. 1st there was hurried and somewhat Cheyne-Stokes breathing; the pulse was regular, 96, but there was no fever. The tempera-

ture on the morning before death, however, was taken in the rectum and found to be 107°. At the autopsy the brain was soft and pale, with considerable excess of pale clear fluid in the lateral and fourth ventricles, but without glueing of the cerebellum to the posterior boundaries of the last-named ventricle. There were signs of not recent meningitis, chiefly at the base, and a large branch of the right middle cerebral was found to be thrombosed. The other organs showed signs of tuberculosis. A minute vegetation existed on the smaller flap of the mitral valve. In his remarks on the case, Dr. Angel Money pointed out the difficulties of diagnosis. He said that in children the symptoms and signs of disease were singularly wanting, especially when we had to do with the brain. A mass of disorganisation in a child would produce much fewer signs than an equal amount of damage in an adult, and this was still more the case the younger the child.—Dr. BERNARD O'CONNOR remarked on the absence of the usual premonitory symptoms, cephalalgia and vomiting; was there any coldness of extremities, and was the dentition delayed?—Dr. GLOVER referred to an interesting case of intermitting and evanescent hemiplegia. A patient, after a long fast and a night's work in the cattle market in December, became hemiplegic at intervals. After a time these recurrences of evanescent hemiplegia disappeared, but vertigo was complained of, and quite recently headache with weakness of the eyes and inequality of pupils developed.—Dr. TONGE-SMITH remarked on a case of transient paralysis of the face, and other parts, which happened in a child who subsequently presented a fever curve just like that of typical enteric fever, though the ultimate issue showed that the case was really one of tubercular meningitis.—Dr. HERON related a case of evanescent paralysis not connected with tubercular disease. The subject was a business man who presented one afternoon the signs of facial paralysis, with deviation of the tongue and thickness of speech. These signs passed away in a few hours, but to be followed by death the next morning.—Dr. ANGEL MONEY, in reply, said that the child had cut the two lower incisor teeth, the left leg and arm were cold as compared with the right, the paralysis was not evanescent, and was almost certainly due to thrombosis of a large branch of the right middle cerebral atery.

The following living specimens were shown:—Mr. Charles Stonham: Recurrent Nasal Polypus, which had been operated on after Lawrence's plan. Mr. Bellamy: Cystic Hygroma (?) of the Neck. Mr. Robert W. Parker: Congenital Hypertrophy of a Limb.

MEDICAL SOCIETY OF LONDON.

Mr. ARTHUR E. DURHAM presided at the ordinary meeting of this Society, held on Monday last.

Mr. SAMPSON GAMGEE exhibited in the anteroom his Antiseptic Absorbent Sponges. These artificial sponges are composed of absorbent gauze, cotton, and cocoa-nut fibre; in the very centre a thin capsule of glass or gelatine is enclosed, containing any antiseptic substance. When the sponge is required for use the capsule is broken, and so the antiseptic diffused. It was hoped that the sponges would be made so cheaply (about three halfpence each) as to come into universal use. Messrs. Burroughs and Wellcome are the manufacturers.

Dr. WHIPHAM read a paper on Suppurative Disease of the Stomach. He first narrated the case of a woman aged forty-nine, who was subject to bilious attacks with vomiting and diarrhœa, which recurred at a month's interval. The appearance of a femoral hernia was accompanied by vomiting, and she was admitted into St. George's Hospital badly nourished, with slight jaundice, epigastric pain, and vomiting of opaque-green and strongly acid fluid. Nutrient enemata were administered. The patient, however, sank into a comatose state, symptoms of peritonitis having developed. At the autopsy there was congestion of the lungs, the mitral valve was contracted, a little purulent fluid was found in the peritoneum, the stomach had greenish-yellow contents, the cardiac end of the organ was thick and much infiltrated with inflammatory products. The pyloric end was found to be infiltrated between the muscular and mucous coats; on the posterior surface an area of suppuration of some square inches was to be seen beneath the serous layer. Microscopical examination showed that the submucous tissue was infiltrated with pus cells, which gathered round the gastric glands. At the posterior surface above mentioned all the coats of the stomach were infiltrated with purulent material. English literature was defective on the subject of acute inflammation of the walls of the stomach, but in foreign books, under the title of *gastritis phlegmonosa*, Raynaud and others had described the disease pretty fully. A circumscribed and a diffuse form were recognised. In the latter form the muscular layer may be destroyed, and the serous coat may or may not be involved; when it is, the subserous tissue may be filled with bloody serum or pus. Thirty-one cases have been collected by Leube, twenty-six in females and five in males; it appeared that middle life was the most favourable period. Bamberger said the diagnosis was impossible; alcohol had been said to be a cause. It occurred in typhoid fever and puerperal fever. Lobsters, strawberries, and podophyllin or other medicines occasionally gave rise to untoward effects, and it had been suggested that such idiosyncrasies might play a part in the causation of the disease in question. The duration may vary from three to eighteen days. Epigastric pain, vomiting, prostration, delirium, dyspnœa, irregular pulse, and fever were the main symptoms. The symptoms in two typical cases (those of Dittrich and Glaix) were described, and many others taken from the works of Raynaud and others. Raynaud's article referred to records of such cases of the circumscribed form as far back as 1620, by Varandæus (Tractatus de Morbis Ventriculi), and again a Dutch physician named Heurn (De Morbis Ventriculi, 1658), to Petri Borelli in 1656, and to Sepulchretum of Bonetus. Raynaud's summary was finally quoted: (1) The term "gastritis" should be restricted to the sense which custom has has assigned to it—i.e., inflammation of the mucous membrane without any tendency of extension to the cellular tissue. (2) There are three distinct varieties of ulcers of the walls of the stomach—intra-mucous abscess, circumscribed abscess of the submucous tissue, and purulent infiltration more or less general. (3) The circumscribed abscess appears in the majority of cases as a chronic condition, and perhaps one of the pathogenic forms of gastric ulcer. (4) The purulent infiltration is an anatomical condition liable to arise in many general diseases, characterised by a disposition of different organs to the production of pus.—Dr. HABERSHON thought such cases were rare, especially to English pathologists. Dr. Hilton Fagge had recorded a case about ten or twelve years ago. Diagnosis was seldom made during life. Direct local irritation could rarely be traced. Diffuse inflammations have nearly always been associated with diseases of the blood, and this was probably the explanation of their not being diagnosed during life.—Sir JOSEPH FAYRER had no recollection of having seen a case precisely like the one referred to by Dr. Whipham. He had met with diffuse purulent infiltration in connexion with cases of septicæmia, but could not explain Dr. Whipham's case.—Dr. C. H. ROUTH remarked on the analogy of certain cases of septicæmia.—Dr. WHIPHAM briefly replied, and agreed that the explanation of his case was as impossible to him as to Sir Joseph Fayrer.

Dr. JOSEPH EWART read a paper on the Treatment of Sloughing Dysentery by Large Doses of Ipecacuanha. The employment of the drug in congestive, exudative, and ulcerative stages of dysentery was fully acknowledged to be good. The plan of giving five-grain doses frequently was thought to interfere with the general nutrition and to lower the vitality much more than large doses at longer intervals. Nausea, retching, and vomiting were much less troublesome with the larger dose. Many authors had regarded emesis as not only not objectionable, but even favourable. He, however, did not think that emesis was good, and endeavoured to ward it off as much as possible. The value of the treatment advocated was illustrated by the history of cases which had been under his care. Doses of a scruple to a drachm every twelve hours was the most satisfactory mode of administering the drug. At the commencement of the disease the remedy might be given more frequently for a short time, but if the disease did not at once yield it was best to resort to infrequent doses. With regard to the pathology, he observed that Dr. E. A. Parkes had first cleared up the subject by assigning to the changes in the solitary glands their true significance. Dr. Ewart classed these changes under four stages:—(1) Injection; (2) enlargement from exudation; (3) rupture of capillaries; (4) molecular disintegration of the wall and escape of the contents of the swollen glands. More rarely the rupture took place into the submucous tissue.—Dr. MEIR had found the ipecacuanha treatment of special value in the acute stage of the disease. He strongly recom-

BEST COPY

mended injections of nitrate of silver for the sloughing form of dysentery.—Sir JOSEPH FAYRER spoke in high terms of praise of Dr. Ewart's work on dysentery. He thought that the permanent retention of the ipecacuanha ingested was by no means necessary. In India dysentery was not now feared if patients presented themselves in the first days of the disease. In sloughing dysentery ipecacuanha was useless except to control further exacerbations of the disease. —Dr. EWART said that he admitted in his paper that in the sloughing and gangrenous stages opium and stimulants were the only good things. In the chronic local forms of sloughing ipecacuanha in large doses morning and evening exercised a beneficial result.

Dr. RADCLIFFE CROCKER showed a specimen of "Bromide" Rash at the site of some recent vaccination scars.

Mr. PEARCE GOULD exhibited a case of Ulceration of a Finger, due to injury of the median nerve.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on April 2nd, Dr. H Gervis, President, in the chair.

Dr. F. NEUGEBAUER (jun.) showed specimens and photographs illustrating the production of Spondylolisthesis, and presented books on the subjects. (His remarks have already appeared in the *Annales de Gynécologie*, Février, 1884.) Remarks were made by the PRESIDENT, Dr. BARNES, and Mr. W. ADAMS. The specimens were referred to a subcommittee.

The PRESIDENT proposed that letters of condolence be sent from the Society to Her Majesty the Queen and H.R.H. the Duchess of Albany on the sad occasion of the death of H.R.H. the Duke of Albany. This was unanimously agreed to, and the President undertook to write the letters.

Dr. CARTER showed two Dermoid Cysts, removed after the death of a single woman, aged fifty, one of the cysts being also cancerous.—Mr. THORNTON made some remarks.

Mr. DORAN read a paper on the Relations of Prolapse of the Vagina to Hernia, illustrated by two pedigrees. The paper described cases of women affected with prolapse of the anterior wall of the vagina, where a very marked family history of hernia existed. The genealogies of the patients were given in a tabular form. The cases all tend to prove the close relation between hernia of the intestine and displacements of the female pelvic viscera.—Dr. MATTHEWS DUNCAN had long taught that intestinal hernia and procidentia uteri were alternative conditions. The whole of Mr. Doran's excellent paper was a part of the great subject of the retentive power of the abdomen or its pressure relations.—Dr. CHAMPNEYS said that in the work of Landau on movable kidney various associated conditions were mentioned. Hernia was found in 7 per cent., descent of the uterus or vagina in 13 per cent., "retroflexion" in 15 per cent., and pendulous belly in 25 per cent. No explanation is given of the term "retroflexion," but it probably meant the condition known as retroflexion with descent, or rather descent with retroflexion. It was his habit to inquire of patients suffering from descent of the pelvic organs as to family histories of hernia, prolapsus uteri and prolapsus ani. One such history was the following. A woman, aged fifty-two, had had procidentia since the age of twenty-seven; her eldest daughter, aged thirty, has had procidentia since the age of twenty-one; all her three sons had prolapsus ani as children.—Dr. HORROCKS said allowance must be made for the fact that in the same family it often happened that circumstances obliged all the members to do hard work.—Mr. DORAN, in reply, said that the history of rupture was often difficult to obtain, as the condition was naturally concealed, especially between the different sexes, and also between those of very different ages. In some cases the bladder was not displaced in descent of the vagina and uterus. He had recently seen a case of apparent cystocele in which no part of the bladder was prolapsed. The distinction between prolapse of the generative organs with and without cystocele is an interesting question to solve in relation to hernia.

Dr. KILNER read a paper on the Use of the Induced Current during Parturition. The effects of the current are the relief from pain, prevention of fatigue and post-partum hæmorrhage, equalisation of the pulse, increase in frequency and strength of the uterine contractions, and the prevention of vomiting. The pain from stretching of the vulva is, however, not alleviated by it, nor does it to any extent relieve pain in cases of instrumental labour. The author now employs the coil (shown) in nearly all cases. In about 300 cases post-partum hæmorrhage occurred only twice. The coil sometimes fails to increase uterine contractions when most needed. After its use for an hour or an hour and a half it exercises its sedative action, and no longer increases the contractions. In some cases it produces violent and almost continuous contractions. In one case a contraction lasted fifteen minutes. No prognosis with regard to these points can be made. It has no effect in diminishing after-pains. It generally prevents or stops vomiting. Statistics were given and directions for use.—The PRESIDENT said that an agent which increased uterine action while lessening pain was almost too good to be true, but labouring women would be grateful for such a method.—Dr. PLAYFAIR had tried the current, and it had proved a failure, perhaps from want of special skill; but if special skill were needed, it could not be generally used. Its effects in diminishing pain were slight, and not to be compared with other means at our disposal. A battery was a cumbrous thing to carry about, and was likely to alarm patients. As an oxytocic he had found it useless. Dr. Kilner compared its action with that of ergot, which should never be used to accelerate delivery. Uterine manual pressure was the best and safest oxytocic.—Dr. WALTER had used the current for more than seven years for inertia of the uterus after the expulsion of the placenta, and found it in some cases superior to ordinary means. He had found it useful in post-partum hæmorrhage.—Dr. HORROCKS asked for details as to live-birth, suspended animation, hæmorrhage, and whether premature labour had been induced. In this respect electricity had always hitherto failed.—Dr. ROUTH had found the electrical current useful in migraine; in lumbago a man would come into his study walking like an old person, and would leave it as erect as a soldier. He had also dispersed uterine fibroids by its frequent use, and tumours of the breast.—Dr. MURRAY thought that if the electric current had such power as had been described, the possibility of rupture of the uterus would have to be remembered. He had used it for hæmorrhage, but considered its value very doubtful.—Dr. KILNER replied that as regards the lessening of pain, the current is more under control than an anæsthetic, and never caused sickness. He had never seen a case of rupture of the uterus.

ASSOCIATION OF MEDICAL OFFICERS OF SCHOOLS.

ACCORDING to the proposal made in THE LANCET of March 1st, the first meeting of the above-named new Society was held at Christ's Hospital, London, on April 16th, when many medical men, representing all classes of schools, were present. The objects of the Association were declared to be: (1) Mutual assistance in promoting school hygiene; (2) meetings for the consideration of all subjects connected with the special work of medical officers of schools. All present or retired medical officers of schools, of children's hospitals, and medical men specially engaged in the study of the ailments of the young, are eligible as members. It was decided to hold three general meetings in the course of the year, the next in July, during the conference on school hygiene to be held at the International Health Exhibition.

The following gentlemen were elected on the Council:—President: Surgeon-Major Evatt, Royal Military Academy, Woolwich. Vice-President: Dr. Fuller, Lancing College. Hon. Secretary: Dr. Alder Smith, Christ's Hospital. Treasurer: Noble Smith, Esq. Other members of Council:—G. Armstrong, Esq., Wellington College; W. Armstrong, Esq., Royal Hospital School, Greenwich; Dr. Haig Brown, Charterhouse; Dr. Brett, London Orphan Asylum; Dr. Fletcher Beach, Darenth Asylum; Dr. Adams Clarke, Leavesden Schools; Dr. Ingle, The Leys School, Cambridge; Surgeon-Major Lever, Military College, Oxford; H. Prangley, Esq., North Surrey District Schools; Dr. Shelley, Haileybury; H. Statham, Esq., The Foundling; Pridgin Teale, Esq., Leeds.

The Secretary will be glad to receive the names of any medical men wishing to become members of this Association.

BEST COPY AVAILABLE

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on March 3rd, Mr. W. N. Price, President, in the chair.

Dr. BARRS read a paper on the Bacillus Tuberculosis, and invited discussion on the communicability of phthisis. After passing in review the observations of Villemin, Wilson Fox, Marcet, Koch, and many others, he stated his belief that the constant presence of the bacillus tuberculosis in all tubercular lesions in man and in animals, including the ordinary form of pulmonary phthisis, had been sufficiently affirmed to warrant the definition of tubercle by the presence of the organism. In dealing with the evidence of contagion from the clinical side, Dr. Barrs criticised freely the cases recorded by Villemin and Hermann Weber, and also those published by the Collective Investigation Committee, and stated his strong opinion that as published the cases could not in any sense be taken as evidence of direct infection from man to man. Although the experimental evidence clearly demonstrated the possibility of infection under certain conditions, he was strongly of opinion that such conditions were not at present established amongst us, and were not in any way likely to be so.—Dr. MYRTLE did not believe in the communicability of phthisis. In Edinburgh he had attended hundreds of cases of phthisis, chiefly among the stone hewers, and he could not recollect a single case where the disease could be proved to have been communicated from the sick to the healthy. He had watched very protracted cases where wives had lived, under the most unfavourable surroundings, with husbands suffering from this disease, without contracting it.—Dr. TIBBITS had not met with any cases where there was the slightest suspicion of the communicability of phthisis. He believed that most of the so-called bacilli would be in a short time nothing but medical curiosities, altogether laid aside but not forgotten.—Dr. HUTCHINSON said in only one case out of sixty-seven treated by himself last year could anything be found at all confirmatory of the contagiousness of phthisis. In this case a man and his brother, both of healthy stock, married consumptive wives; in each case after a few years of married life the wife died of consumption. One brother died of the same complaint a year after his wife, and the present patient, a few months after the death of his wife, is in the second stage of the complaint, with softening of both apices.—Mr. SOLOMON C. SMITH remarked that the proof of the communicability of phthisis came from experimental pathology, and till those experiments were refuted we must accept the theory that the bacilli, which by their growth irritate the tissues to the formation of tubercles, get into the body from without—i.e., by infection. The aim of clinical inquiry should be to discover those conditions of heredity, surroundings, and mode of life which make man's body a fit soil for the growth of these bacilli, which, he felt assured, must be as harmless to a perfectly healthy man as are the bacteria of decomposition and fermentation which he constantly inhales along with them.—Dr. JACOB maintained that it was easy to distinguish the tubercle from other bacilli. He referred to the history of the investigation of the anthrax disease as an instance of the complete establishment of the bacterial pathology of disease, and to the recent discovery of a micrococcus in acute pneumonia as an instance of the direction in which pathological discovery was tending.—Dr. CHURTON had been disinclined to accept the view that phthisis was a communicable disease on account of the paucity of evidence in its favour. But he related the following case:—A clerk, aged forty-three, had had phthisis for eight years. Bacilli had been found in the sputa. He had been married ten years. A year ago his wife began to suffer from cough. She had now consolidation of the left upper lobe, and there were bacilli in the sputa. Her family history was not phthisical in any branch. Her father, mother, three brothers, and two sisters are alive and quite well, but six of her brothers died in infancy, one with "water in the head." She had been subject to depressing influences, husband's illness, damp house, bad drains, &c. Two theories of causation were, therefore, in this case possible. That if phthisis be infectious, it must at least be very hard for a person without distinct predisposition to become infected. With reference to the example mentioned in which four successive wives of one phthisical man had died of phthisis, Dr. Churton pointed out that in an arithmetical series so long and so large as that of phthisis-mortality it was not at all surprising that one such combination should occur quite independently of direct personal infection.—Mr. A. W. MAYO ROBSON thought that although it was difficult to trace out many cases of communicated phthisis, yet some very suspicious examples had been related by several observers; as in the cases reported to the Collective Investigation Committee by himself, where two healthy sisters apparently contracted consumption by nursing a diseased brother, who had obtained the infection away from home. He suggested that, as in the case of unfitness of soil preventing the growth of certain plants—e.g., wheat,—so in the case of the bacillus tuberculosis a want of predisposition might mean an absence of something needful to the growth of the organism; and that this might perhaps explain why some persons were affected whilst others escaped.—Dr. BRITTON and Mr. ARTHUR ROBERTS also joined in the discussion.

Reviews and Notices of Books.

The Field of Disease. By B. W. RICHARDSON, M.D., &c. London: Macmillan & Co. 1883.

THIS readable and well-printed book has been written "for those members of the intelligent reading public who, without desiring to trench on the province of the physician and surgeon, or to dabble in the science and art of medical treatment of disease, wish to know the leading facts about the diseases of the human family, their causes and prevention. Anyone, therefore, who opens this book with the expectation of finding in it receipts and nostrums will not have that expectation fulfilled, and will discover reference to no remedies, except such as are purely preventable in character." In these sentences the author has struck the key-note of the whole of the valuable work which we have before us. The single bulky volume consists of three sections, or "books," as the author calls them. The first one requires but little notice from us. All that need be said of it is that it gives in a concise fashion, almost after the manner of a definition, an idea of each of the various natural ills that flesh is heir to. No doubt, this is a very necessary introduction; but the impress of the author's powerful intellect is better seen in the remainder, and more important parts of the treatise. These deal with the nature and causes of acquired or induced diseases, and with the prevention or preventive treatment of all diseases. The features of note in the work are important, though not numerous. Moderation of language, with extensiveness of information and a thoroughness of diction, will be found to pervade every chapter of the second and third books. As a specimen of the matter and style of the book we take the following passage. Speaking of acquired diseases from physical agencies, whether mechanical or general, Dr. Richardson says of dusts:—"In this term we comprise those particles of solid matter which are mechanically suspended in the air, which settle on the body, which sometimes affect the eyes, and which are inhaled in breathing. It is through the breathing organs that these dusts are most productive of injury; and it is among the industrial classes of the community that the injury produced is most frequent." The kinds of dust are then arranged under three heads: (*a*) cutting dusts, formed of minute, hard, crystallised particles, which have sharp, cutting, and pointed edges, as iron, steel, sand, glass, dried silicates of earthenware, lime, pearl. (*b*) Irritant dusts derived from woods; from ivory; from textile fabrics, such as fluffs of wool, silk, cotton, flax, or hemp; from hair; from clay; soluble saline dusts derived from soluble crystalline substances. (*c*) Obstructive and irritating dusts, composed of carbon, of fine particles of coal-dust, of soot, of rouge, and of flour.

Dr. Richardson has sound common-sense views on the diseases supposed to be acquired from mental, moral, emotional, and habitual influences. Here, no doubt, there is room for

much diversity of opinion, and many authors go to one extreme or other in discussing the power which such agencies may have in the production of disease. At the threshold of the last book the pertinent question is asked, "Why do the phenomena of disease exist and how are they to be prevented?" The influence of the environment is treated of from every conceivable standpoint—atmospherical, meteorological, climatic, electrical, and so forth. The parts played by parasites in the production of human diseases is adequately dealt with. Three theories of the causation of zymotic disease are propounded. The parasitic hypothesis; the vital germ theory of Dr. Beale, which traces the zymosis to a diseased living germ produced in the body itself; and the nervous hypothesis, which the author has ventured to originate, and which traces the zymotic affections to diseased secretions generated under the influence of nervous derangement in the body itself. The final chapters of the work are excellent in every way, and comprise a practical summary of the prevention of disease. The instructions are characterised by that sound logic which, combined with the necessary literary capacity, carries complete conviction to the fair- and open-minded. We are sure the work will be widely read by those members of the intelligent reading public to whom the author addresses himself.

OUR LIBRARY TABLE.

Journal of Anatomy and Physiology. Edited by Professors HUMPHRY, TURNER, and MCKENDRICK. Vol. XVIII., Part 3, April. London: Macmillan, 1884.—This part contains the following articles:—1. The Nature of certain Ligaments, by J. B. Sutton; with a Plate. 2. Some Remarks on Nervous Exhaustion and on Vaso-motor Action, by F. Le Gros Clark, F.R.S. 3. The Development of the Great Omentum and Transverse Mesocolon, by C. B. Lockwood. 4. Notes on two instances of Abnormality in the Course and Distribution of the Radial Artery, by Arthur Thomson, M.B. 5. The Cause of the First Sound of the Heart and the Mode of Action of the Cardiac Muscle, by James Barrett of Melbourne. 6. Notes on Raising the Arm, by Professor Cleland. 7. Osteology of Ceryle Alcyon, by R. W. Schufeldt; with a Plate. 8. Notes on Abnormalities, with special reference to the Vertebral Arteries, by A. M. Paterson; with a Plate. 9. On Multiple Lymphatic Nævi of the Skin, and their Relation to some Kindred Diseases of the Lymphatics, by George Hoggan; with a Plate. 10. Notes on the Viscera of the Porpoise and White-beaked Dolphin, by Professor Cleland. 11. Costal and Sternal Asymmetry, by W. Arbuthnot Lane. 12. Anatomical Notices; with a Plate.

Lehrbuch der Vergleichenden Anatomie der Wirbelthiere. Bearbeitet von Prof. Dr. ROBERT WIEDERSHEIM, Director des Anatomische Institutes der Universität Freiberg. Zweiter Theil, mit 261 Holzschnitten. Jena: Gustav Fischer. 1883.—We had occasion some months ago to call attention to the first part of this work, which is now happily completed, and contains a very full and complete anatomical description of the various classes of the vertebrate sub-kingdom, arranged in an organological manner, the bones, muscles, nerves, the digestive, circulatory, respiratory, and reproductive systems being severally considered in fishes, amphibia, reptiles, birds, and mammals. In a book of this kind, the student requires not so much a detailed account of any particular animal, not a treatise on zootomy, as a broad general view of the relations of different groups of animals to each other, and consequently, when details are introduced they should illustrate points of importance in structure and function: those only should be brought into prominence which show the inter-relation of different organs, how particular structures become modified to meet special conditions of life, and how, from simple beginnings, complex organs are developed. All this has been well understood by Prof. Wiedersheim, whose duties as a teacher have enabled him to seize on salient points, and whose knowledge of special points, as of the anatomy of the amphibia and the nervous system of fishes, is unsurpassed. The book is abundantly illustrated, for the most part, with original drawings, and we can recommend it as the most complete work on the mammalia extant.

Archiv für Pathologische Anatomie und Physiologie, und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. Band XCV., Heft 1. Berlin: G. Reimer. 1884.—The contents of this number include:—1. On the Formation of Red Blood-Corpuscles in the various classes of Vertebrates, by Prof. J. Bizzozero and Dr. A. Torre of Turin. 2. On the Development of Red Blood-Corpuscles, by Prof. Bizzozero. 3. On Nuclear and Cell Division in Acute Hyperplasia of Lymphatic Glands and Spleen, by Prof. Julius Arnold of Heidelberg. 4. On the Hereditary Form of Diabetes Insipidus, by Prof. A. Weil of Heidelberg. 5. A case of Arhinencephalia Unilateralis, by Dr. Selenkoff of St. Petersburg. 6. On the Effect of Blows on the Outer Ear, with especial reference to the formation of Othæmatomata, from experiments on the rabbit's ear, by Dr. E. Frankel of Hamburg. 7. Pathologico-Anatomical Researches, by Dr. R. Schultz of Brunswick: (*a*) Embryonic Outgrowths of Epidermis; (*b*) Sarcomatous Degeneration of a Flexor Tendon. 8. Contribution to the Study of Icterus, by Prof. Quincke of Kiel. 9. On the Cultivation of Actinomyces, by Dr. Oscar Israel of Berlin. 10. Further Contribution to the Pathological Anatomy and Histology of Beri-beri (Kak-ke), by Dr. B. Schenbe of Leipzig.

Archives Italiennes de Biologie. (Profs. EMERY et MOSSO.) Tom. IV., Fasc. 3, 1883.—This part completes the fourth volume of these Archives. It contains sixteen articles, most of them short. They are as follows:—1. Development of the Vertebral Column in Osseous Fishes, by B. Grassi. 2. On Mechanical Stimulation of the Sensory Motor Centres of the Cerebral Cortex, by L. Luciani. 3. On a New Means of Isolating the Sensibility of the Motility of Nerves (*sic*), by A. Morriggia. 4. On the Induced Unipolar Current and the Stimulation of Nerves, by G. Magini. 5. On the Ptomaines in Relation to Toxicological Research, by F. Marino-Zuco. 6. On the Distribution of Nerves in the Follicles of Tactile Hairs in the Vascular Erectile Apparatus in the Ox, by S. Richiardi. 7. On the Brain of the Boa, by Ph. Lussana. 8. On the Sensibility of Parts Deprived of Skin, by Ph. Lussana. 9. On Coloured Audition, by Ph. Lussana. 10. The Areolo-Mammillary Muscle, by A. Marcacci. 11. Contribution to the Physio-pathology of the Spleen, by P. Foa. 12. Experiments on the Partial Reproduction of the Spleen, by L. Griffini and G. Tizzoni. 13. Experiments on the Entire Reproduction of the Spleen, by G. Tizzoni; an Experimental Contribution to the Hæmatopoietic Function of the Connective Tissue. 14. On the Origin of the Red Corpuscles of the Blood in the Several Classes of Vertebrata, by J. Bizzozero and A. A. Torre. 15. On the Formation of the Red Corpuscles; An Appendix to the foregoing Article, by J. Bizzozero. 16. Fixation, Colouration, and Conservation of the Infusoria, by J. Cattaneo.

Archives de Physiologie. (Professeurs BROWN-SÉQUARD, CHARCOT, and VULPIAN.) Séries 3, Tome III., 1884, No. 3.—The following is a summary of the contents of this part: 1. Serge Alferow of Charkow in Russia: A new Apparatus for counting exactly the Number of Blood-globules. 2. Arnozan and Vaillard: Contribution to the Study of the Pancreas in the Rabbit; Lesions induced by Ligature of the Canal of Wirsung. 3. M. V. Cornil: Note on the Microbes of Cutaneous Phlegmon and on their Seat. 4. V. Cornil

and H. Leloir: Experimental and Histological Researches on the Nature of Lupus. 5. Brissaud and Sabourin: Two Cases of Atrophy of the Left Lobe of the Liver of Biliary Origin; illustrating the history of pathological communications between the vena portæ and sub-hepatic veins. This part has five plates.

Journal of Mental Science.—The April number contains the following original articles:—Remarks on the Results of the Collective Record of the Causation of Insanity, by Dr. Herbert Major; the Data of Alienism, by Charles Mercier; Constant Watching of Suicidal Cases, by Dr. Savage; Rectal Feeding, by Dr. Julius Mickle; Studies of Posture Indicative of the Condition of Mind, Illustrated in Works of Art, by Dr. F. Warner; Precautions against Fire in Lunatic Asylums, by Dr. Howden; The Physical Conditions of Consciousness, by Prof. Herzen.

Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S. Vol. V., No. 1.—The articles contained in this number are as follows:—1. The Bacteria of Swine Plague, by E. Klein. 2. On Rhythmic Contraction of the Capillaries in Man, by T. Lauder Brunton. 3. Physiological Action of Condurango, by T. Lauder Brunton. 4. On the Connexion between Physiological Action and Chemical Constitution, by J. Blake. 5. Note on the Action of Digitalis, by H. H. Donaldson and L. T. Stevens. 6. On the Augmentive (Accelerative) Nerves of the Heart of Cold-blooded Animals, by W. H. Gaskell.

Archiv für die Gesammte Physiologie. Herausgegeben von Dr. E. F. W. PFLÜGER. Band XXXIII., Hefte 7 und 8.—This part contains two articles, the first by Professor Tarchanoff of St. Petersburg on the varieties of ov-albumin in birds hatched with feathers and in those that are hatched unfeathered, and on the relative proportion of albumin to yelk; the second is by Johann Meuli, on the function of the thyroid gland.

Deutsches Archiv für Geschichte der Medicin und Medicinische Geographie. Herausgegeben von HEINRICH ROHLFS in Wiesbaden. Band VII., Heft 1. Leipzig: Hirschfeld. 1884.—This part contains an article by Dr. Gieske on Medicine in Japan in Ancient and Modern Times; an essay upon the Music of Richard Wagner, by Dr. C. von Reichert, introduced by the editor, pointing out the reason for the insertion of such criticism into the journal; the conclusion of a memoir of Dieffenbach; and several critical notices and reviews.

Etudes Expérimentales sur la Contagion de la Fièvre Jaune. Par le Dr. DOMINGOS FREIRE.—This pamphlet contains a pretty full account of what Dr. Freire has written on the subject of the contagion of yellow fever. A coloured plate representing the micro-organism, Cryptococcus xanthogenicus, accompanies the text. We have so recently detailed the results of Dr. Freire's observations that further exposition of his views is unnecessary.

BURGH POLICE AND HEALTH (SCOTLAND) BILL.

THIS Bill is already meeting with opposition. The Town Council of Glasgow has adopted a petition against it, or in favour of its being referred to a select committee. Their principal objection to it is on account of the provisions it makes with regard to the small suburban burghs, of which no fewer than nine hem in Glasgow on three sides. These burghs, though in reality part of the city, and enjoying all the advantages of the connexion, are under separate police and sanitary administration, and contribute nothing to the maintenance of the city of which they form a part. The new Bill gives power to these burghs to unite, forming a barrier to the extension of the city and to the uniform sanitary government of what is practically one area. Further, as many of the parts of the Bill are permissive so far as burghs having fewer than two thousand inhabitants are concerned, great differences and much confusion in the sanitary administration of districts artificially divided, but really one, might be expected to arise. The clauses referring to compulsory notification of infectious diseases, which revealed so much difference of opinion last year, are retained in this year's Bill: the medical attendant as well as the householder is bound to report, and gets a fee of two-and-sixpence for each notification. Most of the sanitary authorities are agreed as to the vital importance of these provisions; and if they could be shown to be for the good of the greater number, no objection should be allowed to stand in the way of their becoming law. Many practitioners, however, probably the majority, are of opinion that it will lead rather to concealment of disease, not only from the sanitary officials, but also from the regular medical attendant. These provisions will thus probably be again keenly opposed. The Bill as it stands is, as a whole, a good one, and may be expected to promote uniformity in the regulation of police and sanitary matters in Scotland. It differs in very few respects, save in re-arrangement of clauses, from the measure which failed to pass into law last year. Clauses 40 and 41, which give to small burghs the power to unite, and which have called forth the above-mentioned protest from the Glasgow Town Council, are substituted for Clause 73 of last year's Bill, which made provision for the union of burghs forming one urban district. Parts II., IV., and VI., relating mainly to matters of municipal government, are optional to towns already under private Acts covering the whole ground of the Bill.

EASTER MONDAY MANŒUVRES.

THE arrangements of the Army Medical Department were not less perfect than anything else connected with the Easter Monday field-day at Dover, and, under the direction of Deputy Surgeon-General Stewart, Principal Medical Officer, South-eastern District, were admirably carried out. Field hospitals were pitched at Archer's-court and the rifle ranges for the reception of sick or injured of the attacking and defending forces respectively. Each of the hospitals was in charge of an officer of the Army Medical Department, assisted by a volunteer surgeon, a sergeant and orderly of the Army Hospital Corps forming the subordinate medical establishment. The volunteer artillery of the defending force sent a few of their own ambulance men to assist and to witness hospital practice. Although, like the general engagement, there was some mimic work for the medical staff, fortunately there was but little real practice which called for their attention, a few cases of exhaustion from fatigue and a couple of cases of sprained ankle being the only admissions. There was no bearer company on the ground, but advantage was taken of the occasion to give the regimental ambulance detachments a little practice in rendering first aid to men who fell out, as if wounded, with a ticket attached to each describing the nature of the supposed injury. This practice was admirably carried out and reflected much credit on all concerned. A noticeable feature in this connexion was the number of men in the ranks wearing the Geneva badge, showing that they had passed the course of instruction in ambulance drill, and who as volunteers might therefore be made available in aid of the Army Medical Department in the event of foreign war or grave national emergency.

SMALL-POX having broken out at Epsom, the Board of Guardians at a recent meeting decided to erect a hut, providing accommodation for four patients.

THE LANCET.

LONDON: SATURDAY, APRIL 26, 1884.

THE advocates for determined and effective medical legislation continue to multiply. They might be enumerated as follows:—

The present Government.
The two previous Governments.
The Duke of RICHMOND, Chancellor of the Aberdeen University.
Lord CAMPERDOWN, Chairman of the Royal Commission.
The Medical Council.
The Medical Profession.

The time has gone by for further attempts to please every little body that has survived its *raison d'être* for a generation; it is necessary now to press the measure through its remaining stages. Fortunately there is no reason to think that there are any persons more anxious to place the examining and licensing system of the country upon a more rational and satisfactory footing than Her Majesty's Government, and especially those members of it who have immediate charge of the Medical Bill. They have taken infinite trouble and have shown extreme patience in mastering the principal facts of the case. They are, moreover, acting on the recommendations of a Royal Commission of high character, including medical authorities like Sir WILLIAM JENNER and Dr. ROBERT M'DONNELL, and legal authorities like the late Sir GEORGE JESSEL. They are entitled now to be excused if they decline further conference with interested parties, and proceed to act on their sense of responsibility for the removal of inequalities and scandals in medical examination which involve injury to the public and to medical men.

It is quite possible that even now the corporations who see any risk to their gains will try to raise opposition, and they may secure the attention of a few members of Parliament who in any other question would be ashamed to vote for that which is out of date and condemned on all hands. But it is impossible, if the Government really puts its foot down firmly, that opposition of this kind should stop a Bill that possesses such recommendations, and over which successive Ministers and successive Governments have spent so much time. The House of Lords is the more Conservative of the two Chambers of the Legislature, and it is that in which the Government is in a minority. Here the Duke of RICHMOND appealed to the Government to use its influence to pass the Bill. It has now reached the Chamber where the Government, with a just and moderate measure, is omnipotent. It may be necessary to adduce the grounds upon which such legislation is demanded—the proved inequality of standards in the three divisions of the kingdom, the bogus terms upon which some of the bodies sell their highest qualifications, the curious way in which students educated in one division of the kingdom go to be examined in another, the breach of faith implied in all this between bodies which agreed to co-operate faithfully under the legislation of 1858. Such statements, we say, may be necessary; and Ministers will not be true to their responsibilities if they shrink from them. The subject is one on which the House cannot have much knowledge, and for guidance in regard to which it must look entirely to those who have charge of the Bill. If the existing authorities are well advised, such statements, at least in detail, will not be necessary. They will let the second reading go without opposition, and trust to any reasonable amendments being carried in Committee. But if they are not so advised, then the plain duty of the Government is to determine what reforms are necessary, and to carry a measure by which they will be secured. They must show to their followers that there is no moral or political difference between perpetuating an effete medical or surgical corporation or a disparaged and condemned arrangement, and perpetuating any other arrangement that is unequal and out of date. The greatest corporation of the profession in this division of the kingdom may well wish for legislation that will end the anomaly by which those who hold its diploma are entitled, indeed, to admission to the Medical Register, but are, nevertheless, still disqualified for treating, or at least for recovering charges for treating, the simplest medical case that can arise—in other words, five-sixths of the cases which constitute medical practice.

We do not like to anticipate that any respectable body will incur the responsibility of further obstruction in this matter. That the Edinburgh University should do so, after its recent exhibition of strength, and after giving its support last year to the Bill, we refuse to believe. If it does so, it will incur the disapproval of some of its best friends, who know that even universities have yielded before this to ignoble temptations, and are the better for having their work checked, and that the demand for the degrees of the Universities of Scotland is based on grounds that will suffer no injury by this legislation.

THERE are two forms of "obstruction," or perhaps we ought to say two ways of being obstructive. The first and most obvious, and therefore the more honest, is direct opposition; the other is misconstruction. Now, unfortunately, those who are antagonistic to our earnest demand for the reform—by total abolition—of the "private asylum system," too commonly resort to the last-mentioned mode of throwing obstacles in the way of the change we desire to see effected, and contrive to engage the sympathy of quasi-friends in council by the same artifice. They vehemently contend that there must needs be *private* asylums, because no husband, wife, parent, brother, sister, or even "friend" of a patient, who could afford to pay for privacy, would consent to inflict on the subject of mental disease the evils of publicity. This is about as flagrant a *petitio principii* as we remember to have seen employed in any controversy. No one, so far as we are aware, has ever proposed that well-to-do patients should be denied the advantages, personal and circumstantial, of residence in a private asylum under the care of a selected medical adviser. We freely admit—indeed, we have never ourselves questioned or heard anyone else question—the expediency of preserving the class of "licensed houses" or private asylums intact. Meanwhile, what we, in common with the thoughtful

public, demand, is the placing of these necessary institutions on such an economic footing that their proprietors or lessees shall not be immediately interested in the residence of individual cases under their care. We adhere strictly and literally to the expression of opinion made by the late Mr. WAKLEY, in his place in the House of Commons, in 1841: "I entreat the House to observe the operation of the law as regards lunatics. Suppose I have a relative who is possessed of a large fortune. I perceive certain eccentricities in the conduct of that individual. From the great affection I have for that relative, and the still greater affection I have for his property, I cause a Commission of Lunacy to be issued out, and, discovering him to be insane, place him in confinement. Then what motive of action is given, under the present system, to the person in whose charge the lunatic is placed? *Why, it calls into operation the principle of selfishness common to human nature.* The proprietor of the asylum will argue that he gets £400 a year for the charge of the gentleman so long as he remains under that roof; and if he recovered, then he (the proprietor) would lose that annual amount. Suppose an honourable gentleman were to go to a doctor, and say 'My liver is diseased, and so long as it remains so I will give you £100 a year.' What motive of action in such case would be given to the doctor?" This is a simple, plain, and absolutely faithful statement of the case against private asylums, or rather against the economic footing on which they stand. There is not a word to be added to it, and not one to withdraw or omit. The *system* is radically bad beyond amendment or apology. It argues wonderfully for the moral of the medical profession, and redounds greatly to the credit of the men engaged in the specialty of lunacy, that, with a system which "calls into operation the principle of selfishness common to human nature," it is rare to find a single instance of even "suspicious" detention.

In rejoinder to the argument that proprietors of asylums have no "motive of action" to cure their patients rapidly, we are told that they find it most conducive to their reputation, and altogether the best policy, to secure "small profits and quick returns." We do not mean quick returns to the asylum, although it is notorious that in lunacy practice it is sometimes possible to get several "cures" out of the same case; the Commissioners being wholly misled, and their statistics rendered altogether worthless by this fallacy! What we mean, however, is that the apologists for private asylums contend—first, that it is their interest to discharge patients quickly; second, that the best asylums have always patients waiting for vacancies. Of course there is something in this. Give a dog a good name and you will find he is petted and trusted—at least until he betrays his real character, and bites someone. Now, as a matter of fact, the so-called "best" asylums *do* keep patients a long while, and it is difficult to get them out of such institutions, particularly when they pay from six hundred to a thousand a year! We do not believe in *best* asylums. Some of the "worst" are better than the "best" in regard to the celerity and completeness of the curative work accomplished within their walls. It is not in respect to particular asylums or classes of asylums we are speaking, but of the system as a whole. It is wrong in principle and bad in policy to make the success of an asylum dependent upon the amount of its receipts for residence. What we have proposed, and still contend ought to be done, is to place private asylums on a public footing by buying them up, as the private business of the telegraph companies was purchased, and to have them worked by public authority, the receipts all going into a common fund for the country, or at least for the county, so that the special value of each asylum shall be appraised on other than simply monetary bases. All officers of asylums ought to be paid by salary and appointed by a public body; in short, no person having charge of the insane should benefit either directly or indirectly by the moneys paid for the maintenance of lunatics in asylums. It would not be difficult to carry out this proposal. The purchase need not be made by a fund raised for the purpose, but simply by the creation of Asylum Stock, negotiable in the market, and bearing a fixed rate of interest. Existing proprietors might be "bought out" in such stock and left to convert their bonds into money if they so pleased, by sale or exchange, as proposed by Mr. R. H. PATTERSON, the well-known economist, for the purchase of the "vested interest" of gas and water companies. Something of this sort will assuredly have to be done in the long run, and it would be better to do it at once. The present position of the medical profession in relation to the keeping of asylums and the practice of lunacy is nothing less than a scandal.

THE Minutes of the proceedings at the late meeting of the Medical Council are now to be had in a compact form of Messrs. SPOTTISWOODE for one shilling, and supply much material for reflection as to the state of the profession, and the futile attempts of the existing bodies to do spontaneously what they have failed to do for the last thirty years. We may touch on two or three points raised in this interesting little volume.

In the general abeyance of the ethical functions of the individual corporations, it is satisfactory to find that the Medical Council has recently seemed more to realise its judicial responsibilities. It is no little power, that of removing a name from the great roll of the profession. On the other hand, it is no little misfortune for the public and the profession when no authority in professional ethics exerts its influence, and disgraceful or infamous conduct in a professional respect goes unnoticed. It would be painful to indicate instances by name; but it is gratifying to know that the Medical Council has dealt seriously with several cases of professional misconduct.

The annual income of the Medical Council is a matter of much interest. The average income for the last seven years has been £6730; the average expenditure £5398. But for the last year (1883) the income was £7945 7*s.* 6*d.*, the expenditure £4451 6*s.* 6*d.*, showing a profit of £3494 1*s.* The Council now is becoming rich, having a total investment by the three branches of £36,169 17*s.* No wonder that the disposal of this surplus under the new Bill is a matter of interest to the existing authorities; but it is equally a matter of moment to the profession, by whom it has been contributed.

The most hollow part of the business before the Council was that of receiving, and in the Scotch case of approving, schemes for a Conjoint Examination between all the corporations in Scotland, and two of the three corporations in

England. These schemes will be found in full in the Minutes. To approve of schemes for Conjoint Boards with a Government Bill before Parliament was surely a procedure undignified as regards the Council, and disrespectful towards the Government and Parliament. It can deceive no one, however, who knows the state of the whole question. The most theoretically perfect combination of corporations in Scotland could not guarantee that their examinations would be equal to the corresponding examinations in England, and *vice versâ*.

IN prospect of another epidemic of small-pox it is but our duty to place on record the more recent evidence of the wonderful completeness of the immunity from small-pox conferred by the revaccination of adults. Mr. MARSON'S remarkable experience is familiar to every member of the profession—that during the thirty-five years he had been medical officer of the Small-pox Hospital he had never known a nurse or servant to contract the malady. He says, "I revaccinate them when they come there, and they never have small-pox, although they are exposed to the infection every day." But it may be said that this is old experience and something newer is wanted. In the recent dreadful epidemics has the reputation of revaccination survived the terrible test of life in a small-pox hospital? It has done so splendidly, as the following facts, from an article by Dr. COLLIE in Quain's Dictionary of Medicine, will show.

During the epidemic of 1871, 110 persons were engaged in the Homerton Fever Hospital in attendance on the small-pox sick; all these, with two exceptions, were revaccinated, *and all but these exceptions escaped small-pox.* In the epidemic of 1876–77 all revaccinated attendants escaped the disease, *whilst the only one who had not been vaccinated took the disease and died of it.* In the epidemic of 1881, of ninety nurses and other attendants of the *Atlas* Small-pox Hospital Ship *the only person who contracted small pox was a housemaid who had not been revaccinated.*

It must be clearly understood that the revaccination here referred to is what Dr. COLLIE calls *successful* revaccination. Revaccination that does not succeed is useless, and worse than useless—it deludes the patient into a false sense of security. It is most important that revaccination should be performed only with recent lymph, with enough of it, either direct from the arm or preserved in hermetically sealed tubes, taken from healthy children, and with clean lancets. Revaccination so performed will result, in a large proportion of cases, in more or less vesiculation and slight malaise. When no result is produced, the operation should be repeated, with still more attention to the conditions of success we have mentioned. The troublesome people who do not take easily should not be given up till they have been vaccinated with lymph direct from the arm. Mr. MARSON did not repeat revaccination; but when this operation is performed about puberty, or earlier, as it should be in epidemic seasons, it ought for safety's sake to be repeated once in adult life. The facts adduced by Dr. COLLIE are not less interesting as showing the liability of persons who have not been *revaccinated* to contract small-pox—generally, but not always, in a mild and modified form—than as showing the security of the revaccinated. It is enough to place these facts before the public and the profession. They are the despair of anti-vaccinationists, and they constitute the most brilliant illustration of the beneficence of the art of Medicine. All protectives against small-pox, compared with this, are a sham. The best constitution in the best situation is mocked in its contest with this disease if not partially protected by vaccination, or wholly by revaccination.

Annotations.

"Ne quid nimis."

THE CHAIR OF PATHOLOGY AT CAMBRIDGE.

THE Vice-Chancellor of the University of Cambridge has announced that the election to the newly created chair of Pathology will be held during the present term. The stipend attached to the professorship is £800 per annum, but the holder is forbidden to engage in medical practice. The electors are the Vice-Chancellor, Dr. Gaskell, Professor Paget, Professor Humphry, Professor Michael Foster, Dr. J. F. Payne, Professor Latham, Sir James Paget, and Dr. J. Burdon Sanderson. The Vice-Chancellor has also given notice that the Rede Lecture will be delivered by Mr. Francis Galton, M.A., F.R.S., on May 28th; the subject will be "The Measurement of Human Faculty."

THE EDINBURGH TERCENTENARY.

THE great meeting at Edinburgh to celebrate the termination of three hundred years of useful work in the University of Edinburgh, and to inaugurate, we trust, a continuation of its career equal to or surpassing the past, was brought to a conclusion last week, and the distinguished visitors assembled from all quarters of the world to do honour to this great seat of education and learning are again scattered to their various homes. But the recollection of the proceedings will long leave a very pleasant impression on the minds of those who took part in them. The arrangements were admirable, and were carried out in a manner which reflected the greatest credit on all concerned. There was a marked desire on the part of all classes to do honour to the occasion, and to the guests who assembled to take part in the proceedings. The municipal authorities, the University Court, senators, and council, the students of the University, the Faculty of Advocates, the Royal Academy, the Royal College of Physicians and Surgeons, the Royal Medical and the Harveian Societies, and the general public, all contributed their share to the success of the festival. At the festive meetings there was, of course, a considerable amount of speaking, but it was for the most part by men of acknowledged standing and great talent, and although the speeches necessarily contained a good deal of not unmerited laudation of the University of Edinburgh for what it has done in the past, the speakers did not fail to point out that this involved the duty of progress in the future, and that we and those who come after us have a serious responsibility laid on us of keeping up and largely adding to the glorious reputation which has been handed down by our forefathers; and on this point there was none of the addresses which impressed us so much as those to the students at their forenoon meeting. We have elsewhere endeavoured briefly to convey to our readers a summary of the leading events which have taken place on this memorable occasion. It was an assembly of some of the most eminent men of the present day in literature and science to do honour to a university which has sent forth a host of the illustrious men who have preceded them, and it was characterised by a spirit which could not fail to rejoice the hearts of all lovers of science, literature, and art. Edinburgh may well be proud of the congregation of

so many men of world-wide reputation to do honour to her university, and we feel sure that they, on their parts, will carry away with them feelings of gratification at the reception accorded them.

HYPNOTISM.

THE curious phenomena collectively designated by the term "hypnotism" have frequently been the subject of popular attention, more especially under the mysterious names of Braidism, Animal Magnetism, and Electro-biology. Hypnotism in a simple form is, as our readers very well know, a very old story. More than two hundred years ago the possibility of "enchanting" a hen by drawing a line before its eyes with a piece of chalk was well known, and was demonstrated to an awe-struck audience by the Jesuit priest, Anasthesius Kircher. Possibly, on account of its supposed association with magic, little notice was taken of this remarkable phenomenon until about one hundred years ago, when a Swiss, Anton Mesmer, brought the subject into notoriety in France and applied it to man. In the earlier half of the present century, Mr. Braid of Manchester examined the matter with scientific care, and tried its curative efficacy on his patients in England; but his views met with disfavour, and the question was not taken up by the scientific or the medical world until comparatively recent times, when a number of physiologists attempted to investigate it. Dr. Gerald Yeo, Professor of Physiology at King's College, has recently devoted some attention to the subject. We may briefly summarise the conclusions at which he has so far arrived. It is believed that the corpuscles of the grey matter of the nervous centres are called into activity by special nervous influences, which, like those affecting the muscular and glandular tissues, are associated with changes in nutrition. These nerve-regulating centres are constantly kept alive to the state of the various parts of the body, and accordingly affect the nerve mechanisms belonging to each. When several of the more influential textures are fatigued, the entire frame is made to repose (sleep). In sleep a variety of mental and muscular acts may be performed, if certain tissues or organs remain in a state of activity (somnambulism). Without sleep, in the ordinary sense, the nervous "governors" of certain organs and parts may be thrown out of gear by notice of a special condition of the organ arriving at its nerve-regulating centre. The impulses indicating this condition (fatigue) may be counterfeited by certain variations in quantity or quality of ordinary stimulation. When local psychical arrests are thus produced without real fatigue of the organs, the surplus energy, arriving at the excito-neural centres, sets up an excessive action of some groups of corpuscles, and thus certain faculties appear exalted in acuteness.

THE CAUSE OF DEATH.

AN inquest was held on Thursday, April 17th, at Wallgate, before the borough coroner, on the remains of Ellen Rowe, aged eleven years. It appears that the deceased girl was travelling between Platt-bridge and Wigan stations, when she met with her death. Her body was found near the main line, with both legs cut through. At the inquest the coroner's officer deposed that the skull was badly fractured, and that this was in his opinion sufficient to account for death. The facts of the case, so far as they were known, were no doubt correctly stated, but what we take objection to is the practice now becoming the fashion of receiving opinions as to the cause of death from non-medical witnesses. The evidence did not prove that deceased accidentally fell from the carriage, although it undoubtedly suggested it. However improbable, it is not impossible that a robbery or outrage was attempted by a fellow-traveller. If in the judgment of the coroner it is not necessary to call a medical witness, we think the safer course for him to take is to direct the jury to bring in an open verdict. Quite recently an inquest was held on the body of a man found in a narrow ditch by the wayside, with the face submerged. Some blood was observed upon the head of the deceased. A labourer was asked his opinion on a vital point in the case, and a verdict of "Death from suffocation" was returned. There was no post-mortem examination, nor was any medical testimony requested, although the cause of death was most problematical. We shall consider it our duty to expose and attack such irregular and defective proceedings as those described in the last-mentioned investigation as long as they are brought to our notice. The liberty and safety of the subject are not made more secure by official trifling with the circumstances that underlie the loss of life.

THE RECENT EARTHQUAKE.

THE mighty forces, whatever they may be, at work in the body of the earth are never at rest, and the surface is continually being visited with tremors which, as a rule, are so slight as not to attract the attention of the world's inhabitants. Such, however, was not the case in regard to the convulsion which visited the eastern counties of England at an early hour on the 22nd inst., and which was so distinctly felt in the metropolis. Of all the phenomena of nature none so impresses the human mind with terror as an earthquake; its unlimited, its sudden, and its dreadful effects leave no certain remedy and admit of no refuge to the terrified inhabitants of the town or country which it visits. Though ancient authors, notably Seneca, Strabo, Pliny, and Thucydides, mention a variety of stupendous effects produced by earthquakes—the rending of mountains, the appearance and disappearance of islands, the destruction of cities,—history gives us no certain information respecting their origin, the knowledge of the subject possessed by the ancients amounting merely to conjecture and vague hypotheses. In more modern times various explanations have been put forward, both by the learned and unlearned, amongst which appear electricity, subterranean winds, the fall of rocks owing to the cavernous nature of the earth, the dashing of cold matter on masses of molten rock causing sudden expansion of the cold mass, &c.; but the correctness of any one of these explanations is open to grave doubt. It is, however, certain that an intimate connexion exists between volcanoes and earthquakes, the latter being comparatively common and most destructive in the neighbourhood of a crater, and especially so when no eruption of the volcano has occurred for some time previous. Though the continent of Europe has frequently experienced severe shocks of earthquake, Great Britain has, from some cause or other, enjoyed comparative exemption; shocks certainly have been felt, but the damage done has been trifling compared with that resulting from earthquakes in other countries. The shock on the 22nd instant was most distinctly felt in the metropolis, in Cheapside, Fleet-street, and the Strand; and so distinctly was the vibration felt in the offices of this journal, that the compositors left their work in a body, under the impression that the building was about to fall. The accounts given are exactly similar, and all agree in stating that the "cases" throughout the composing room shook, causing each compositor to suppose that his neighbour was playing a practical joke; the gas-burners vibrated, and the floor was felt to distinctly oscillate. This sudden motion produced in some a feeling of slight nausea and giddiness. No further disturbance, however, occurred, and the men speedily returned to their work. Though the damage done in London was *nil*, at Malden, Birmingham, and Colchester some destruction of property took place, the damage in the latter

town being estimated at £10,000. As it is more than a century since such a disaster occurred in England, the sensation throughout the country was, as might be expected, very great.

PROFESSOR VON FRERICHS.

THE jubilee of the illustrious physician who has occupied the chair of clinical medicine at the University of Berlin for a quarter of a century, Professor von Frerichs, has been celebrated this week in connexion with the meeting of the Medical Congress, of which he is the President. Prince Bismarck has sent to the Professor, who was for a long time his physician, an autograph letter, congratulating him on the twenty-fifth anniversary of his professorship, and at the same time presenting him with a valuable silver goblet. In a highly appreciative review of his life work, the *Berliner Klinische Wochenschrift* (April 21st) narrates how he commenced practice with his brother at Aurich, and how he was soon after occupied in "privat docent" and became extra-professor at Göttingen, where he received calls to Giessen to the chemical chair, to Marburg to that of surgery, and to Kiel to that of clinical medicine. He chose the latter, and in 1851 commenced at Kiel the line of work to which he has since been devoted. In the following year he was appointed professor of pathology and therapeutics, and director of the medical clinic at Breslau, which he held until, in 1859, he was called to Berlin to succeed Schönlein. He had already made a reputation, and had published the first volume of his work on Diseases of the Liver when this important step was taken. From that time to this Professor von Frerichs has not ceased to labour in the field of clinical medicine, and it is justly claimed for him that he has throughout aimed to liberate medicine from the old school of theorists and to base it upon physiological facts. At the present time he is about to publish a work on Diabetes, and he has always been an active contributor to the *Archiv für Klinische Medicin*, the current number of which is dedicated to him and is filled with contributions from eleven of his pupils. The esteem in which he is held and the admiration felt for his great diagnostic powers find expression in the address, drawn up by his colleagues and pupils, which has been presented to him this week.

INSULT TO A PAROCHIAL MEDICAL OFFICER.

IT is so usual as to be almost a rule that where services have been rendered during a long period—we do not except paid services—to those who could appreciate their value, and have been acceptable, they should receive some special recognition in testimony of their admitted worth. The law does not demand any such proof of esteem, yet the custom is prevalent. It has arisen spontaneously out of conscience, out of our sense of fairness, which is the foundation of law. It lives in a way in which spontaneous errors do not—it lives with us because it is natural to us. This is a kind of giving which does not impoverish. It has been found to pay, for it is part of the common law of courtesy under which co-operation is most sincere and service most willing. A request by Mr. Charles Spencer, a practitioner of advanced age, and medical officer for the Whitchurch Division of Aylesbury during forty years, now just terminated, that the Board of Guardians should allow him some pecuniary bonus on his forced retirement, appears far from unreasonable. The Board may have had good reasons for declining to accede to it. Such a request could certainly not be pushed in the face of their unwillingness, and was not; but the manner in which it was received was nothing short of scandalous. A member formally proposed that the clerk be instructed to offer Mr. Spencer, on behalf of the Board, an order for the workhouse. This proposal passed without rebuke; indeed, its first suggestion was received with laughter. Fortunately for the reputation of the Aylesbury guardians, it was not put to the vote. Whatever may be the opinion of parochial managers as to the desirability of testimonial grants, it is to be hoped that no false tenacity of opinion or feeling of committedness will prevent the Aylesbury Board from offering Mr. Spencer a just and frank apology for their very coarse reception of a fair proposal.

INDISCRIMINATE DISTRIBUTION OF DISINFECTANTS.

THE practice of obtaining disinfectants for private drains from the public authorities is gaining ground rapidly throughout the metropolis. Anyone, who is not obviously a wealthy person, can call or send to the office of the local sanitary inspector and obtain gratuitously disinfectants to throw down the drains. Sometimes objections may be raised, but, as a rule, the matter is promptly settled by giving the applicant a small packet of inexpensive disinfecting powder, or a little carbolic acid. This, of course, is better than doing absolutely nothing; and, even in cases where the applicants can afford to pay, it is preferable to give the disinfectants than run the risk of the nuisance remaining unabated. But, we maintain, that this is altogether insufficient. No drain, in proper working order, ought to give rise to any nuisance whatever. Excepting cases of temporary stoppage, disinfectants are, at best, but of momentary service. If a drain leaks, or is otherwise defective, the danger of sewer-gas poisoning, though always present, is not always manifest. Bad smells arise but occasionally, then only the household take alarm, disinfectants are procured, and the nuisance is apparently at once removed. As a matter of fact, the only result is to engender a sense of false security, and to mask the danger for a few days instead of removing it altogether. We would therefore suggest that, though disinfectants ought in no case to be refused, their distribution should at once be followed by a domiciliary visit. The demand for disinfectants might serve to indicate where domiciliary visits should be paid. By this simple means innumerable cases of defective drainage would be discovered, especially in middle class houses. Such activity might require additions to the sanitary staff; but for so good a purpose no objection need be raised to the extra expense. As matters now stand, however, it is a question whether the indiscriminate distribution of disinfectants, without subsequent inquiry, does not do more harm than good. But for the facilities of obtaining these disinfectants, there are many cases in which the house drains would be dug up, repaired, and properly re-laid.

THE ELECTRIC LIGHT IN OUR HOMES.

ONE is accustomed to hear of the electric lamp as the light of the future. We know it as yet, however, but in a comparatively distant way, as the illuminator of large thoroughfares and of buildings more or less public. It is not at all so common in our homes as in the interest of health and cleanliness it might be. A process of development and accumulation of ideas must go on before there will be sufficient tension of public opinion on the subject to stimulate a general demand. Our own feeling is decidedly in favour of the new invention on certain grounds. Gas and oil, with all their brilliancy, have never been remarkable for wholesomeness or purity. They may be said to respire at our expense, seeing that our vital oxygen supplies their sustenance also, and their combustion does not fail to taint the atmosphere with useless or hurtful products, even as our breathing does. Smoky ceilings and furniture are among their essential inconveniences. In the electric light we shall have a power superior to these in efficiency and devoid of

their drawbacks. To the eyes of some it may seem too bright; but the same disadvantage is possible under the present system, and the electrical glare has already, by various contrivances, been mellowed to the degree of comfort. With careful insulation and arrangement the risk of injury from contact with the apparatus may be rendered practically *nil* to the householder.

THE GERMAN MEDICAL CONGRESS.

FOLLOWING close upon the Tercentenary celebration at Edinburgh, which was attended by so many well-known continental *savants*, comes the Medical Congress at Berlin. This Association met for the first time in Wiesbaden two years ago, and held its second annual meeting in the same city. The selection of Berlin for this year's meeting will doubtless have greatly increased the number of its members. The arrangements have been most complete, and we shall no doubt hear of a successful gathering. A daily journal containing information of the programme has been published under the editorship of Dr. Boerner, the editor of the *Deutsche Medicinische Wochenschrift*. On Sunday last a reception was given at the Hotel Kaiserhof; and on Monday the scientific proceedings were opened with an address by the President, Prof. von Frerichs, followed by a debate on Pneumonia, introduced by Drs. Jürgenson and Fränkel. The afternoon meetings on each day were devoted to papers and demonstrations. On Tuesday the subjects under discussion were Poliomyelitis and Neuritis, opened by Drs. Leyden and Schultze; and on Wednesday Nervous Dyspepsia, opened by Drs. Leube and Ewald. In the evening of this day a festival banquet in celebration of the jubilee of Prof. von Frerichs took place at the Kaiserhof, and the proceedings closed with a general meeting on Thursday. Amongst the papers read were several on neuro-physiology and pathology—viz., on the Localisation of the Cerebral Functions, by Herr Goltz, of Strasburg; Clinical Observations on Localisation of the Cortex Cerebri, by Herr Günther, of Berlin; on Reflexes, by Herr Rosenthal, of Erlangen; and on the Knee-phenomenon, by Herr Schreiber, of Königsberg. Dr. H. Weber, of London, contributed a paper on School Hygiene in England, especially with reference to outbreaks of contagious disease; Herr Pfeiffer, of Weimar, one on Vaccination; and Herr Seegen, of Carlsbad, one on Diabetes. Arrangements were also made for visiting various hospitals, asylums, and public works.

THE LUNATIC HOSPITAL, NOTTINGHAM.

THE twenty-eighth annual report of this hospital, into which patients are received who, not being paupers, are unable to pay the whole expense of their care and maintenance, has just been issued, and is in every respect a highly satisfactory one. The Commissioners in Lunacy, who inspected the institution in May, 1883, and again in October, state in their reports that the order of the establishment is excellent, and that in their opinion the substantial comforts of this hospital will bear comparison with any in this country. They also remark that, considering the excellent provision made here for the reception of persons of unsound mind, they think it can only be due to the distance from London that the institution is not full. From the report of Dr. Tate, the medical superintendent, it appears that on Jan. 1st, 1883, there were in residence 76 patients (38 male and 38 female). During the year 13 new cases were received, making a total of 89 under treatment. Of this number 9 were discharged and 3 died, leaving 77 patients resident at the close of the year. Dr. Tate expresses his regret that the idea that insanity is a disgrace to the relatives of the afflicted person is frequently fostered by those whose professional knowledge should lead them to point out the fallacy of such an opinion, instead of encouraging it. During the year no patient has been restrained or secluded. Restraint has never been employed, and seclusion only on one occasion, since the opening of the institution twenty-five years ago. Nothing can be more unwise and injurious than delay in obtaining proper treatment for persons suffering from mental disorder not arising from organic disease, such cases being in their earliest stages readily curable as a rule, and yielding easily to prompt and skilful treatment; when valuable time is lost, however, they are apt to drift into a chronic state, and the chances of recovery are greatly diminished and often destroyed.

THE MECHANICAL TREATMENT OF DISEASES OF THE STOMACH.

THE practice of treating patients suffering from chronic dyspepsia, who resist the influence of regulated diet and of drugs, by washing out the stomach, which originated some years ago in Vienna, has recently taken root in America, and has formed the subject of a short paper by Dr. W. B. Platt, in the *Maryland Medical Reporter* of March 8th, 1884. We are there informed that cases most intractable to all other treatments have quickly yielded to this means. The principle underlying the treatment is to keep the stomach clean, and so far as is possible at rest, for a time sufficient to allow of its complete recovery. The operation should be performed in the morning, before breakfast. A soft, red rubber tube is passed gently down into the stomach quite to the pylorus; with this is connected about a yard of common flexible tubing and a glass funnel, which is held on a level with the patient's breast, and tepid water is poured slowly into the funnel until a sensation of fulness is experienced; the funnel is then depressed to the level of the waist, and the fluid allowed to syphon out. The process is repeated until the water returns quite clear. The washing should be repeated every day for a week or ten days, and during that time the diet should be restricted to milk or a little meat; then the washing may be done every second or third day, and finally abandoned at the end of three weeks. The advantages claimed for this method are that it is efficacious, simple, and safe, and it certainly is worth a trial in intractable cases of chronic dyspepsia, a disease which makes its victims a burden to themselves and their friends, and hitherto has brought but little credit to physicians.

WHAT LOOKS LIKE PLAGIARISM.

A BOOK entitled "Manuel de Diagnostic Médical" has recently appeared from the pen of Dr. Paul Spillmann, who since the year 1867 has been the prolific author of twenty-one volumes dealing with the most diverse subjects. On the front cover of his latest production is an impression which from its speaking likeness to a woodcut in Dr. Gowers' book on the diagnosis of diseases of the spinal cord at once attracted our attention. On turning over the leaves of the French volume we meet with four woodcuts intercalated in the text and representing the best methods of producing the knee-jerk and other so-called reflex phenomena. The striking similarity of these woodcuts to those in Dr. Gowers' book can leave little doubt of their identity. There is, however, nothing either in the preface, text, or index of Dr. Spillmann's book pointing to the source of these illustrations. The only allusion which, we think, may justly be called "distant," is perhaps that in the preface, which says that the principal classical works of France, England, and Germany have served as "la point de départ dans la rédaction de ce manuel." As special mention is frequently made in the book under discussion of the names of other authors in various departments of medicine, the injustice to Dr. Gowers only appears the greater.

THE SMALL-POX TENT HOSPITAL AT DARENTH.

FROM a Memorandum by Messrs. A. and C. Harston, the architects, we learn some particulars about this camp which are especially interesting at a time when small-pox is on the increase in the metropolis. The hospital, which is believed to be the largest civil hospital of its kind, was formed in March, 1884, by the managers of the Metropolitan Asylum District, for the reception of convalescent small-pox patients from their hospitals in London and the hospital ships on the Thames at Long Reach. The camp consists of nine 50 ft. by 25 ft. hospital marquees, which are used as sleeping tents for females and children, six similar marquees for men, three for nurses, and two for commissionaires and other *employés*. There are also two larger marquees for the day use of male and female patients respectively, tents for the medical superintendent, steward, and superintending nurse, and numerous smaller tents used as scullieries, &c. The sleeping tents form a double row, with a space of eighty feet between, and in each row they are placed fifty feet apart and slightly *en échelon* to suit the levels of the ground. The tents for females and children occupy the upper part of the ground, and are divided by the bath-house and the enclosure containing the nurses' tents from the part of the camp occupied by men. The day tents are in the recreation grounds; and between the lower part of the men's camp and the public road are the kitchens, stores, tents for *employés*, &c. The ground is so fenced as to leave a belt of neutral ground between the public road and land occupied by other persons and the camp. At the entrance an iron hut has been erected to serve as a stores reception-room, and so avoid the too near approach of tradesmen. The hospital marquees are double tents, having wood floors raised upon brick piers. Each tent has a canvas porch and a detached canvas closet fitted with a Moule's earth commode. They are warmed by steam-pipes and lighted by gas. Each tent affords accommodation for twenty beds. Fourteen sets of Moule's apparatus (those supplied to the tents being intended for night use only) have also been fixed in four groups in the recreation grounds, with the necessary portable tanks. The soil from the commodes is buried. Every precaution seems to be taken that patients on their discharge shall leave the camp perfectly "clean and non-infectious." It is worth noting, and reflects great credit on all concerned, that the instructions for the formation of the camp were given by the Chairman of the Committee on the 27th of March, and that within one week—viz., on the 3rd of April—the work was so well advanced that the managers were able to receive the first batch of twenty patients.

ACTINOMYCOSIS.

THE current number of the *Revue de Médecine* contains a lengthy article by M. Firket of Liège, upon Actinomycosis, in which he confirms the fact that the anatomical lesions are due to the colonisation and development in the tissues of the actinomyces bovis; that the disease spreads from one part of the animal to another by transference of the fungus, and that it can be similarly transferred to other animals, but that such propagation is limited to particular species of animals. As to the manner in which the parasite exerts its pathogenic action, much yet remains to be made out. It does not appear to produce "coagulation necrosis"; but, from a study of the earliest formed colonies, Firket finds that the first effect of the vegetation is to induce cellular hyperplasia. It is as if the tissue elements resented the intrusion of the parasite, which, however, mostly gains the upper hand, so that the issue is the formation of inflammatory and suppurating foci that characterise the disease. Actinomycosis has as yet only been found amongst herbivorous and omnivorous animals, including man, and the frequent occurrence of the primary tumours in relation to the jaws seems to indicate that the fungus gains entrance with food. Firket, whilst admitting that this is possible sometimes, points out that it will by no means account for all cases, since it implies a breach of surface in the buccal mucous membrane, which often does not exist. It is more probable that abrasions of the skin afford a way of contamination; whilst cases have been recorded by Ponfick and others of pulmonary disease obviously dependent on the inhalation of the fungus. Speaking of prognosis, M. Firket remarks that the disease, especially in the cervical form, is capable of being cured by energetic treatment, whilst if left alone the issue is invariably fatal. Surgical intervention, in the opening of abscesses, and scraping their walls and the walls of the fistula, is the only mode of dealing with a disease which he compares not inaptly to the Madura foot disease, due to the presence of the fungus Chionphye Carterii. The whole essay is one worthy of perusal, for the author has availed himself of all that has been written on the subject, as well as of the facts gained from personal observation.

PROFESSOR PAGET.

THE announcement made by one of our daily contemporaries last Saturday that the Regius Professor of Physic at Cambridge had been dangerously ill came as a sudden shock to his numerous friends, and has given rise to many anxious inquiries. We are glad, however, to be able to state that though the professor has been confined to his room, the symptoms, after the first twenty-four hours, were not such as to occasion serious anxiety. On returning from a short holiday in Wales Dr. Paget attended a meeting of the Cambridge Medical Society on the evening of April 4th; here, owing to the room being imperfectly warmed, he contracted a chill, a rigor followed in the night, and this was succeeded by congestion of the right lung, limited in extent, and slight pleurisy. The mischief, however, was fortunately arrested, and at the end of a week Dr. Paget was able to leave his bed for the couch. Since then, though naturally feeling some weakness, he has been steadily improving, and we are glad to learn, on our latest inquiries, that he has now almost recovered his usually good health.

DERBYSHIRE AS A HEALTH RESORT.

MR. RUSKIN, in a letter to the *Manchester City News*, has drawn attention to the beauty of Derbyshire, and has done no more than justice to a singularly picturesque county, which for some reason has not hitherto attracted visitors in proportion to its merits. Buxton, no doubt, is at times thronged by the gouty and rheumatic, who find health in its springs, but there are many other parts of the county which are peculiarly fitted for those in need of climatic advantages. The moors not far from Matlock are distinguished by the singularly pure and bracing character of the air, and if Mr. Ruskin finds on looking back, as he says, that he owes more to the Via Gellia than the Via Mala, it is not less true that many an exhausted nervous system would derive more benefit from Dethick Moor than from Zermatt. The intense feeling of exhilaration experienced at very great heights is by no means a correct index of the amount of real recuperation of nervous energy, whilst the excitement and temptation to excess in muscular exertion are apt to be followed by a reactionary depression on descending to lower levels. The moorlands of Derbyshire and of its neighbouring county, Yorkshire, are free from this rather serious objection, at the same time that they are remarkable for the invigorating character of the air to be found upon their by no means trifling elevations.

TRAUMATIC CEREBRAL ABSCESS EVACUATED THROUGH THE NOSE; RECOVERY.

AT the ordinary meeting of the Royal Academy of Medicine of Rome, held on Jan. 27th last, Dr. Tassi presented a patient who, three months previously, had sustained a comminuted depressed fracture of the skull in the left frontal region. The patient, F. B——, from Civita Vecchia, was a robust railway engine driver. The blow had been inflicted with a sledge-hammer; and the extensive comminuted and depressed fracture was complicated with diffuse hæmatoma and very serious cerebral symptoms; loss of consciousness, high fever, paraplegia, and paresis of rectum and bladder succeeded. Antiphlogistics and counter-irritants were employed, and the propriety of trephining was discussed. Some sero-purulent fluid escaped through the centre of the wound, which admitted a probe for a considerable distance into the cranial cavity. The symptoms of cerebral irritation and compression increased, the limbs became contracted, divergent strabismus and priapism ensued, and the speech was monosyllabic and unintelligible. The seventieth day after the injury, sero-purulent fluid suddenly burst from the left nostril, and continued for four or five days, amounting in the aggregate to several ounces. As the discharge progressed, the symptoms of irritation and compression decreased. The patient first recovered self-consciousness and speech, then sensitive and motor power. In the course of fifteen days all the functions of organic life were restored to the normal standard; and, in three months from the date of injury, the patient was able to return to work.

GAFSA BUTTON.

THE French expedition in Tunis was not unattended with medical results. Drs. Boinet and Depéret have taken the opportunity of studying the gafsa button, a malady which seems to have been caught by some of the French troops. This affection appears to be a mild form of that exotic cutaneous disease known by the names of Biskra button, Aleppo button, &c. It is said to be endemic in the South of Tunis; is probably contagious and certainly inoculable in man. Its inoculation in the guinea-pig gives rise to certain diverse morbid changes; in the rabbit, and especially in the horse, an ulceration is set up which bears some resemblance to the original disease. Inoculation may be effected either with the lymph from the sore or from the crusts, or finally with cultivation fluids. The cause of the disease is not a fungus, as Mr. Vandyke Carter has asserted for the Indian button and M. Weber for the Biskra sore, but is believed to be due to a micrococcus which can be isolated by cultivation.

THE LEEDS GENERAL INFIRMARY.

VERY important changes have recently taken place in the *personnel* of the Leeds General Infirmary. On the expiration of twenty years' office Dr. Clifford Allbutt, Mr. Wheelhouse, and Mr. Pridgin Teale have retired from the active and onerous duties of physician and surgeons to the institution, and have been appointed consulting physician and surgeons. A curious and somewhat novel arrangement has been made, by which they are to retain six beds each. A medical officer whose term of office has expired by lapse of time, but who still retains a fixed number of beds, seems to us to be placed in a somewhat anomalous position: he is neither an active visiting officer nor a proper consulting one. But probably there is some judicious reason for the compromise, and the names of the past Leeds staff are so well known, and their teaching ability is so manifest, that therein may be found the excuse. Such a proceeding, however, is a bad precedent, unless the hospital has sufficient beds and to spare for its active staff. Messrs. A. F. McGill and R. W. Robson have been appointed to the full surgical posts, thus leaving vacancies for two assistant-surgeons. Dr. Clifford Allbutt's vacancy has not been filled, but Drs. Barrs and Jacob have been appointed to the new offices of assistant-physicians. The eminence of Leeds as a school of practical medicine and surgery is traditional, and such changes as these cannot but sustain its well-deserved reputation.

THE HOSPITALS ASSOCIATION.

THE second meeting of this Association since its inauguration was held on Wednesday last, Major Ross in the chair. Two papers were read, both dealing with the question as to how far our hospitals should be training schools for nurses. Dr. Bristowe advocated the scheme of training nurses at our hospitals and infirmaries. He gave an account of his experience of thirty-eight years at St. Thomas's Hospital, and went into the details of the working of the school of nursing supported by the Nightingale Fund. He said that it must be recognised that the demand for trained nurses was increasing year by year, and thought it was hardly possible that an efficient nursing school should be carried on without entailing some expense on the institution with which it was connected. Miss Lückes, Matron of the London Hospital, also contributed a paper in which she urged that hospitals should be utilised for the training of nurses to the fullest possible extent, subservient, however, to the individual interests of each hospital and of any medical school in connexion therewith. In the discussion Mr. T. Holmes regarded hospitals as primarily institutions for the education of medical men, secondly for the treatment of the sick, and thirdly for the training of nurses. Messrs. Burdett and Macnamara, and Drs. Gilbart Smith, Kingston Fowler, and Percy Smith joined in the debate. A general opinion seemed to prevail that nurses ought to be trained at their own expense and not out of the funds of a charity.

THE VALIDITY OF BURMESE DIPLOMAS.

A VERY remarkable decision has been given in the Liverpool police-court by Mr. Raffles in favour of Signor de Romanzies, a coloured person, summoned under the 40th section of the Medical Act, for wilfully and falsely taking and using the name and title of Doctor of Medicine. He produced a diploma from Burmah, and on the strength of this Mr. Raffles, looking at the case of Ellis *v.* Kelly, refused to convict. It is not for us to debate a point of law with Mr. Raffles, but we think he is entirely wrong in this decision, and that the mere fact that on *some* of his plates and advertisements the letters I. N. D. were made to follow M.D. is no excuse for using the words M.D. in other instances alone. A Burmah diploma has no validity in this country. The defendant, on a similar charge in 1882, was convicted. The diploma to which Mr. Raffles attaches so much consequence was not then produced. Though dated 1868, it was on that occasion said to be left in India. A case for the Superior Courts was granted.

NOTIFICATION OF INFECTIOUS DISEASES.

COMPLAINTS having been made with regard to the action of some of the sanitary inspectors of the Manchester Corporation in the removal of infectious cases to hospital, the Manchester Medico-Ethical Association appointed a deputation to confer with the Health Committee on the subject. The deputation met the Health Committee on April 7th, and after some friendly discussion it was agreed that the following suggestion of the deputation should be adopted:—"That in future no case of infectious disease should be removed to hospital unless such removal be certified as advisable by the practitioner in attendance."

PROFESSOR LORETA'S NINTH OPERATION FOR FORCIBLE DILATATION OF THE ORIFICES OF THE STOMACH: RECOVERY.

ON the 15th of March Professor Loreta forcibly dilated the cardiac orifice in the Surgical Clinique of Bologna. The patient, E. L——, a young woman aged twenty, had for four years manifested all the symptoms, rational and direct, of ulcer of the stomach. For the last twelve months constriction had steadily increased; at first solids, and then liquids, entered the stomach with difficulty, so much so that only a few drops of broth could be swallowed at a time. Regurgitation of substances swallowed became the rule. The body wasted rapidly, and life could only be maintained with nutritive enemata. Having diagnosed stenosis of the cardiac orifice, Professor Loreta proceeded to dilate it. He opened the abdomen in the linea alba, and found the stomach thick, small, and contracted. He incised it freely, and passed an elastic sound through the cardiac orifice to make way for his dilating instrument. This soon overcame the obstacle, in spite of efforts to vomit, and the œsophagus was found much dilated. The apertures in the stomach and in the abdominal wall were sutured separately. The operation was performed under chloroform in thirty minutes; and the patient, so soon as she had recovered from the narcosis, to the great surprise of the onlookers, swallowed three spoonfuls of water with perfect ease. Professor Loreta has favoured us with an obliging note, stating that the patient has completely recovered ("ora trovasi completamente guarita").

AMERICAN MEDICAL ASSOCIATION.

THE annual meeting of the American Medical Association is to be held from May 6th to 8th at Washington under the very distinguished presidency of Professor Austin Flint. Meeting in such a city and under such auspices, it is expected that the attendance will be very large and the success of the gathering very marked. We have lying before us the programme of the section of Practice of Medicine, from which we learn that, in addition to several papers on subjects of interest, there are to be three special discussions on "A Contribution to the Clinical Study of Epilepsy," the "Clinical Study of the Heart Sounds," and "Tuberculosis."

SMALL-POX IN INDIA.

DR. R. PRINGLE, the senior officer as regards length of service in the Vaccine Department in India, in a letter to a contemporary regarding the epidemic of small-pox now raging in Madras, says that the result of his practical experience of twenty years in the densely populated districts of the Upper Doab, or Mesopotamia of India, with an average of 465 in a square mile and a total population of ten millions, and without in that period the necessity having arisen for performing one case of revaccination, is that small-pox cannot exist, even in the slightest epidemic form, in localities where the birth-rate has been reached for a series of years by vaccine operations. Last year at this time the most extensive and fatal epidemic of small-pox ever seen by Dr. Pringle during his twenty years' service in the Vaccine Department prevailed in the North-West Provinces and Oudh, and most crucially was his vaccination tested, the result being that in the cantonment of Meerut, with a population of nearly 40,000, not one case of small-pox, as the military records show, occurred in the person ot a native vaccinated by his subordinates. In the city of Meerut, with its population of 80,000, two cases of small-pox occurred in the persons of two Bengalees, emigration agents, one of whom was inoculated and the other vaccinated in Bengal. In the sacred city of Muttra, with its vast pilgrim traffic, not one fatal case of small-pox occurred, whereas in 1863-64, on the recorded evidence of Dr. Smith, at present civil surgeon of Allahabad, 3500 children died of small-pox in less than two months. In the Sanitaria of Landour and Mussouree not one single case was met with among the vaccinated native population. In the Dehra Dhoon, with a population of nearly 150,000, the highway to Hurdwar from the Punjaub, small-pox is almost unknown among the natives. If small-pox appears as an epidemic in any locality, be it city, district, or province, in which the vaccine operations have for, say, six consecutive years, reached the birth-rate, Dr. Pringle gives it as his opinion that the vaccine returns are false or the vaccination spurious as regards the immunity it imparts, immunity being imparted by successful vaccination without the practice of revaccination being necessary.

THE CITY OF LONDON CORONERSHIP.

SEVERAL medical men are likely to be candidates for the vacant coronership for the City of London. The following have been mentioned as intending candidates:—Mr. A. C. Fletcher, Mr. T. Gurney, Mr. Horsford, Mr. A. B. Thompson, Dr. Wynn Westcott, and Dr. G. E. Yarrow. Though each of these gentlemen may be assumed to be well qualified to discharge the duties of the office, we believe that Dr. Wynn Westcott is the only one who has had actual experience. As Deputy-Coroner for Central Middlesex Dr. Westcott has been called upon to hold a large number of inquests, not a few of which have been of a complicated character and of great public interest and importance. On all occasions he has performed his task judiciously and efficiently. Indeed, throughout his official career he has exhibited all the qualities of a good coroner. In his case medical attainments distinctly enhance his peculiar fitness for the post of coroner. *Cæteris paribus*, we hold that medical men are specially indicated for the office of coroner. In the present instance the electors of the City coroner may be embarrassed by the number of medical candidates, unless the rest withdraw in favour of Dr. Westcott, who, in addition to being first in the field, has the preference that belongs to his present official position.

MEDICAL LEGISLATION.

The Times, in a very sensible leading article, says there can be but one opinion as to the necessity for medical legislation. The following words express our own view as well as that of our contemporary on the subject:—"If legislation be required at all—and on this there cannot be two opinions,—it is the plain duty of the Government to determine what reforms are necessary, and to carry a measure by which they will be secured. It is not only a scandal, but a grave abandonment of duty, that the public welfare should have been entirely neglected, while futile endeavours were being made to obtain agreement among persons whose interests are discordant."

SPLENECTOMY.

MR. KNOWSLEY THORNTON removed the spleen at the Samaritan Hospital on Tuesday, the 22nd inst., by median abdominal section. All its lower part was hollowed out into a multilocular cystic cavity, and it weighed 2 lb. The patient, a single girl aged nineteen, had been known to have a tumour for two years, but latterly it had grown fast and given much pain. During the tying of the pedicle the shock was very severe, but she revived directly the tumour was cut away and the drag taken off the pedicle. She is progressing satisfactorily. The specimen will, we understand, be shown and further progress reported at the Pathological Society.

HOSPITAL POSTS AND LONDON QUALIFICATIONS.

DR. MACNAUGHTON JONES and Dr. MARMADUKE SHEILD have both written to *The Times* on the subject of the qualifications necessary for holding hospital appointments in England. Dr. Jones condemns and Dr. Sheild approves and defends a rule requiring that the candidates for these appointments shall possess certain qualifications of the Colleges of Physicians and Surgeons of England. Is there really any such rule? Is it not a fact that a Fellowship of the Edinburgh College of Surgeons, which hitherto has been practically purchasable, is accepted as a qualification for some hospital appointments in London? The question raised is a very interesting one, and worthy of being fully considered. But we do not see that it has much to do with the Medical Bill. Most hospitals are institutions maintained by voluntary subscription, and it is for the governors to determine what qualifications they will require. Meantime Dr. Sheild would find it difficult to show that graduates of the universities are not excluded from the higher posts of the profession in London, unless they also chance to be Members of the London College of Physicians.

MEDICAL EMERGENCIES ON THE CONTINENT.

THE *Continental Times*, Geneva, has an excellent letter by "A Medical Man," vindicating the right of a medical man to claim extra fees for attendance in obstetric cases where the necessity arises for visits in excess of the normal number —say, daily for a week. The writer properly denounces the practice of hotel-keepers charging a commission to practitioners for recommendation, and also denounces those practitioners who accept such recommendation. He gives the excellent advice that strangers needing advice should ask the chaplain, the consul, or the banker to recommend a practitioner.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

IN connexion with the meeting of the American Medical Association, to be held in Washington in May, the Association of American Medical Editors will hold its annual meeting. An address is to be delivered by Dr. Lartius Connor on "The American Medical Journal of the Future, as indicated by the History of American Medical Journals in the Past," a subject well adapted for the theme of an address and possessing much interest for such an audience. Dr. N. S. Davis is subsequently to open a discussion on "How far can Legislation aid in Elevating the Standard of Medical Education in the Country?"

THE CHOLERA COMMISSION.

THE return of Dr. Koch and his colleagues from India is to be made the occasion of hearty welcome both at Vienna and Berlin. In Vienna this tribute is particularly gratifying when we recall the somewhat urgent opposition which Koch's researches upon tuberculosis met with last year at the hands of some of the leading scientists of the Austrian capital. At Berlin, a committee has been formed, presided over by Dr. von Bergmann, with whom are associated Professors Frerichs, Leyden, Henoch, Bardeleben, Du Bois-Reymond, and many others.

SEWER VENTILATION AT CHESTER.

TOWNS and other districts having imperfectly ventilated sewers, together with complaints as to nuisance and injury to health which go hand in hand with this condition, may profit by the experience which has been obtained in the City of Chester in this matter. The due ventilation of the sewers was completed in 1878. The deaths from "fever," which was essentially enteric fever, in the five years which immediately preceded the provision of the sewer ventilation were 95; whereas in the five years since 1878, and this without any such increase of population as would account for the difference, they have only numbered 47. In this way it would seem that half the lives formerly sacrificed to this disease have been saved, and sanitary authorities would do well to note the effect of the provision of adequate sewer ventilation in this respect.

WE are exceedingly sorry to see that (unless the somewhat detailed account in the daily papers be an elaborate hoax) an attempt is being made to revive, and not only to revive but apparently to renew popular interest in, the detestable and cruel form of so-called "sport," cock-fighting. Surely no sportsman worthy of the name can regard these encounters as anything but a reprehensible and miserable means to a blame-worthy end—that of gambling. As long as human nature remains as it is, we suppose a certain section of the community will gamble—and suffer for it; this we are unable to prevent, but we can raise our voices against the accomplishment of those ends by means of gross cruelty to the lower animals. It is positively sickening to read of a poor bird, clumsily accoutred, cutting its own throat with the sharp steel spur intended for the destruction of its antagonist. The arm of the law is long enough, if stretched out, to reach, and strong enough to repress, such practices; and we fancy that although "under the auspices of a county magnate things were all right," it would require no very great detective skill to bring to book those concerned in the two "mains" fought last week between the fair counties of Kent and Surrey.

IN their report on the composition and quality of daily samples of the water supplied to London for the month ending March 31st, Messrs. Crookes, Odling, and Tidy state that in character it differed but little from that supplied in February. The mean proportion of organic carbon was somewhat higher, but the maximum amount found in any particular sample fell short of the maximum observed in February. All the samples (546 in number) were, without exception, characterised by freedom from turbidity, and by a marked and increasing degree of freedom from colour.

ON the representation of Dr. Crookshank, 120 untried prisoners have been released at Benha and Zagazig, the majority of them having already served the maximum term of imprisonment to which they were liable had they been tried and found guilty. This systematic release is to continue until all the untried prisoners (1400 in number) are set at liberty.

AT a recent meeting of the Council of the University of Melbourne, Dr. Williams, who for the past two years has been Lecturer on Materia Medica and Therapeutics, was appointed Lecturer on Clinical Medicine in the University, and Mr. T. M. Fitzgerald was appointed to the vacant post of Clinical Lecturer on Surgery.

HER MAJESTY has been pleased to confer the Order of Commander of the Bath on Mr. Arnold Royle, M.R.C.S., &c., who had been in medical attendance on the late Duke of Albany since 1875.

THE health of Professor Gosselin, the celebrated surgeon, who is at Cannes at present, is causing some anxiety among his numerous friends in and out of the profession owing to his advanced age.

AMONG the wounded officers and men brought home by the *Jumna* are Surgeon Cross, R.N., who received a bullet wound in the forehead at El Teb; and Surgeon Prendergast, A.M.D., suffering from a spear wound in the chest.

THE Duc d'Aumale, who has been confined to his room for some time from ill-health, has so far recovered as to be able to resume his military and other functions.

THE TERCENTENARY FESTIVAL OF THE EDINBURGH UNIVERSITY.

THE Tercentenary Festival which was celebrated last week was successful beyond all expectation, and will probably be considered one of the most remarkable events in the history of the city. Rarely, if ever, has there been a more representative gathering of men learned and distinguished in almost every department of science, literature, and art. Those who were fortunate enough to be present will probably never forget the impressive service in St. Giles's Cathedral, and the magnificent spectacle of the Graduation Ceremony.

The weather, though somewhat cold, was fortunately fine, and the natural beauties of the city were seen to the very best advantage. The arrangements, with the exception of some crushing at the receptions, passed off without the slightest hitch, and the authorities of the university and of the town, and the students' representative council, deserve the warmest congratulations on the successful manner in which they were carried out. The demand for tickets for all the entertainments was unprecedentedly large, only a small proportion of those who applied being fortunate enough to obtain them.

The festival, which may be said to have been officially opened with a reception by the Lord Provost and magistrates in the Industrial Museum of Science and Art, in reality commenced with the ordinary Graduation Ceremonial which terminates the winter session; it was held in the United Presbyterian Hall on the morning of Tuesday, the 15th, and was largely attended, Professor Virchow, Mr. Max Müller, Mr. Browning, and other distinguished visitors being present. The address to the graduates was delivered by Professor Calderwood, who took occasion to warn them against the danger involved in the specialisation of studies, which had become a feature of university education. At the reception and conversazione given by the Lord Provost and magistrates about 4000 persons were present, and notwithstanding the crowded state of the galleries and a good deal of crushing, due to the fact that only one means of entrance and exit existed, which was totally inadequate for the large number present, a pleasant evening was passed in recognising and discussing the "lions" and listening to an attractive musical programme.

The conversazione was followed by a torchlight procession, in which some 700 or 800 students took part.

At a still later hour, the Cap and Gown Club, presided over by the Dean of the Faculty, entertained Sir Stafford Northcote and many of the distinguished visitors to supper. About 320 gentlemen were present, the company being arranged round numerous small tables. In accordance with the rules of the Club, there was no speech-making, the evening being devoted to singing, story-telling, and instrumental music. The entertainment was a most enjoyable one, and the company did not separate until a late hour.

On Wednesday, the 16th, the proceedings commenced with a religious service in St. Giles's Cathedral. Some time before the hour at which the service was announced to commence, the nave and transepts, which had been reserved for the public (admission being by ticket), were filled in every part. The University Company of the Queen's Edinburgh Rifle Volunteer Brigade, under the command of Major (Professor) Turner, was stationed as a guard of honour between the Cathedral and the Parliament House, where the university authorities and guests assembled. A procession having been formed, they issued two by two through the Signet Library and entered the Cathedral by the western doorway in the following order:—

The University Mace-bearer.
Lord President Inglis, Chancellor of the University.
Sir Stafford Northcote, M.P., Rector, and
Principal Sir Alexander Grant.
Sir Lyon Playfair, M.P., for the Universities of
Edinburgh and St. Andrews.
Delegates from Universities.
Delegates from other Bodies.
Persons to receive honorary degrees.
The University Court.
The Senatus Academicus.
The Board of Curators.
The Lord Provost, Magistrates, and Council of
Edinburgh.
Old Honorary Graduates.
Other Guests.

Among the many distinguished guests were the Earl of Rosebery, the Earl of Galloway, Lord Balfour of Burleigh, and Lord Reay, who appeared in Court uniform. At the entrance to the cathedral the procession was met by the clergy, and were conducted to their seats by the stewards of the church. The Royal pew, which was draped in black, was occupied by the Earl of Rosebery, the Earl of Galloway, Lord Balfour of Burleigh, and Lord Reay. The service was most impressive; the music, more especially Handel's Hallelujah Chorus, which was splendidly rendered, being very fine. Professor Flint preached, and, while enforcing the lessons of the university's honourable past, urged the necessity of progress in all departments, not excepting that of theology, if it was to fulfil its great mission in the future.

From St. Giles's the university authorities and guests betook themselves to the Medical School, where a grand luncheon was given in the Anatomical Museum by the Principal and professors of the Faculty of Medicine. At this entertainment, the arrangements for which were of the most elaborate and perfect description, and which was intended to serve as a "house-warming" for the magnificent new buildings, the subscribers to the building fund were largely represented. Sir Alexander Grant occupied the chair. Most excellent speeches were delivered, amongst which those of Prof. Turner and Sir James Paget were perhaps the most striking.

After the banquet an adjournment was made to the Theatre Royal, where the students, assisted by some lady amateurs, gave a dramatic entertainment. The play of "The King o' Scots," founded on Sir Walter Scott's "Fortunes of Nigel," was extremely well put upon the stage, and went off with great *éclat*.

In the evening a conversazione was given by the university authorities in honour of their guests in the Library Hall of the Old University Buildings. Finally the day's proceedings were brought to a close by a students' ball in the Assembly Rooms, at which many of the professors and distinguished visitors were present.

On the morning of Thursday, the 17th, a grand Graduation Ceremony was held in the United Presbyterian Synod Hall. The ceremony commenced with the reception of delegates, who, as they were severally presented to the Chancellor, handed to him addresses of congratulation from the sister universities and other bodies they severally represented. Then the honorary degrees were conferred. Finally the Chancellor wound up the proceedings with an address, in which he reviewed the past history of the university, and attributed its present prosperity to the influence exercised in its government by the general body of graduates, to the benefactions which have accumulated, more especially during the past twenty years, to the learning and zeal of the professoriate, and to the aptitude which the institution has shown in meeting the educational wants of the Scottish nation. Before commencing his address, the Chancellor read the following telegram, which he had received during the course of the proceedings from H.R.H. The Prince of Wales:—"The Prince of Wales, Sandringham, to the Right Hon. John Inglis, Chancellor of the University, Edinburgh. As an old alumnus and honorary graduate of Edinburgh University, I congratulate it on the occasion of the Tercentenary which has brought together so many learned delegates from all parts of the world."

After the Graduation Ceremony, the Royal College of Physicians, with its usual liberality, entertained at luncheon, in its beautiful hall, a large number of the distinguished visitors, the President, Dr. G. W. Balfour, presiding.

During the course of the afternoon the Faculty of Advocates, who had taken advantage of the occasion to give

éclat to the opening of the new library hall, and the Royal Medical Society, held receptions, both of which were very largely attended.

In the evening the Tercentenary Banquet was held in the Drill Hall, Forest-road, which had been tastefully decorated for the occasion, and was a most brilliant success. The Chancellor presided, and in addition to the university guests it is stated that 1300 persons were present. Two large galleries which had been erected for the occasion were occupied by ladies, and added much to the beauty and attractiveness of the scene. After dinner the Chancellor read the following telegram which he had received from Her Majesty the Queen. It was dated Flushing, and showed that Her Majesty was on the course of her journey:—"In congratulating your university on the completion of its Tercentenary, I ask you to welcome the guests who have assembled to honour the event."

The toast list was both a long and attractive one, and it is probable that on no previous occasion have such a number of really good speeches been delivered to an Edinburgh audience. The speakers included the Chancellor, Baron de Penedo, M. Pasteur, Lord Rosebery, Lord Provost Harrison, the Lord Bishop of Durham, the Lord Rector (Sir Stafford Northcote), Sir Lyon Playfair, Count Saffi, the Vice-Chancellor of the University of Oxford (Prof. Jowett), Prof. Elye, Lord Napier and Ettrick, the Rev. Canon Westcott, Sir Henry J. S. Maine, Prof. Virchow, the Earl of Wemyss, his Excellency J. Russell Lowell, Prof. von Helmholtz, Sir Frederick Leighton, Sir John Lubbock, M. de Lesseps, and Sir James Stephen. Nothing could exceed the enthusiasm and animation which were displayed throughout the whole proceedings, which lasted for fully six hours, four at least being occupied with the speeches.

On Friday, the 18th, the proceedings commenced with a breakfast by the Royal College of Surgeons, under the genial presidency of Dr. Smith. This was followed by one of the most important and interesting meetings of the whole Festival—viz., a gathering of the students and their friends in the United Presbyterian Synod Hall. The Lord Rector (Sir Stafford Northcote) occupied the chair, and most interesting addresses were given to the students by Mr. Russell Lowell, Prof. Beets, M. de Lesseps, M. Pasteur, Prof. Virchow, Prof. von Helmholtz, Count Saffi, Prof. Laveleye, and Lord Reay.

In the afternoon a most successful concert was given in the Music Hall by the University Musical Society, under the direction of their president and conductor, Prof. Sir Herbert Oakeley. The President and Council of the Royal Scottish Academy also held a most enjoyable reception in their galleries on the Mound.

In the evening the city was illuminated, and there was a brilliant display of fireworks from the Castle Esplanade, the streets being thronged by many thousands of people.

The Festival was brought to a close by a students' symposium, held in the Drill Hall. The symposium, which was in reality a smoking concert, commenced at 11 o'clock. Sir Stafford Northcote occupied the chair, and was supported by most of the professors and distinguished visitors. Every corner of the building was occupied, more than 2000 persons being present. The utmost good humour and enjoyment prevailed. Sir Stafford Northcote, Sir Alexander Grant, Sir Lyon Playfair, and the Dean of the Faculty made short speeches or told stories. There were many excellent songs, including one of his own composition admirably rendered by Professor Rutherford. The atmosphere of the hall, filled as it was by the fumes of 2000 pipes, is more easily imagined than described. Not the least pleasing part of the performance was the admirable behaviour of the students and the order which prevailed throughout, notwithstanding that the "wine of the country" was freely circulating.

In our list last week of those connected with Medicine and Surgery on whom the degree of LL.D. was conferred, the following names were omitted:—George William Balfour, M.D., President of the Royal College of Physicians, Edinburgh; John S. Billings, M.D., Washington, D.C., U.S.A.; John Syer Bristowe, M.D., F.R.C.P., F.R.S., St. Thomas's Hospital, London; Surgeon-General Thomas Crawford, M.D., Director-General, Army Medical Department; W. H. Flower, LL.D., F.R.S., Director of the Natural History Department of the British Museum, London; Professor Edward Frankland, Normal School of Science, South Kensington Museum; Sir John Watt Reid, K.C.B., M.D., Director-General, Medical Department, Royal Navy; M. H. Saxtorph, Professor of Clinical Surgery, University, Copenhagen; Edward Henry Sieveking, M.D., F.S.A., F.R.C.P.L., Physician Extraordinary to H. M. the Queen, London. The same degree was also conferred *in absentiâ* on Robert Wilhelm von Bunsen, Professor of Chemistry in the University of Heidelberg; Dr. Samuel Gross, Professor of Surgery in Jefferson College, Philadelphia; Dr. J. Henle, Professor of Anatomy in the University of Göttingen; and Dr. Joseph Hyrtl, Emeritus Professor of Anatomy in the University of Vienna.

The following Latin poem is from the pen of a respected correspondent, a distinguished *alumnus* of the northern University.

ACADEMIÆ EDINENSI SALUTEM.

Grata renascentes Musis curantibus artes
Limina! vos tria secla locupletata tropæis
Doctrinæ et spoliis cultus civilis honorant!
Namque loci Genius trucidato principe mœstus
Eversisque deum tectis vidauque Maria
Rite luit facinus sceleratum, Urbique potenti
Quis juvenî inferias miserando redderet ultor
Talia respondit: "Non sic punire nocentes
Vult nova Religio; sed fisa plamine Christi
Se gerit in pravos lenem ponitque secures
Vi sine nobilior venturaque rectior ultrix.
Patribus hinc curæ, curæ popularibus esto
Emollire animos cultu propriumque per usum
Provehere in melius. Sit mens tibi talis, Edina:
Conde novas ædes super istis fausta ruinis
Usque recepturas natos constanter alendos
Artibus ingenuis, per quos tua fama per orbem
Prodibit, donec propriam te Pallas honoret
Ambiguæque nova tellure habeantur Athenæ!"
Hos monitus imo sub corde volutat Edina.
Conditur ecce! novo ritu sublime columnis
Tectum quod Superos petat almos fronte serena,
Unde imbuta bonis eat artibus aptaque pubes
Tradere, cursores velut, immortalia cultus
Lumina sectanti. Nunc rite mederier ægris
Corporibus, dare jura reis, ducentoque Christo
Cœlicolum in sedem lapsos revocare beatam,
Hic labor, hoc opus est tibi clarum, O Scotica proles,
Cen patrios, mundi fines habitura supremos.
Quæ tam sepositа est, quæ gens tam barbara, cui non
Sit virtus inducta valens cultusque politi
Pube Caledonia? Quæ terra, quod æquor, Edina,
Pacifero vexilla tuæ haud videre cohortis
Illatura malis leges ægrisque salutem?
Te damnosa dies, O Nutrix alma! relinquet
Incolumem; te, etiam post hæc, tria secula matrem
Rite salutabunt meliori prole beatam.
Decidet Arturus prius alta sede revulsus
Et refluet montes visura Bodotria seguis
Quam nomen laudesque tuæ labantur ab orbe.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the General Sanitary Administration of the Tynemouth Registration District, by Dr. BARRY.[1]—Some short time since we drew attention to a number of separate reports which had been prepared by Dr. Barry on the eleven sanitary districts comprised within the Tynemouth registration district. These have now been supplemented by a somewhat voluminous report by the same inspector on such matters as are general to the whole of the districts concerned, and especially as to the best arrangements which, by combination amongst the several authorities, can be designed for providing means of isolation for the several districts. The whole district covers an area of 38,635 acres, and had in 1881 a population of 114,197 persons, living in 17,401 houses.

[1] To be had of Messrs. Knight and Co., 90, Fleet-street, E.C.; Messrs. Shaw and Sons, Fetter-lane; Messrs. Haddon, Best, and Co., 227, Strand; and Messrs. P. S. King and Son, King-street, Westminster.

The dwelling accommodation is described in detail, the defects of the old colliery houses and the improvements in the modern ones being pointed out; and in a similar way a general description covering several pages is given as to the water-supply, the sewerage and drainage, and the means of excrement and refuse disposal which obtain in the district. Then follows an elaborate statement, illustrated by a series of tables, showing the mortality of the district for a series of years, both from general and special causes, the rates being compared with those for London and England and Wales. The mortality from scarlatina is very high; indeed twice as high as that obtaining in the country generally and in the metropolis. The causes of this are fully discussed, and it is evident that the affection arises to a large extent from the unrestrained personal intercourse which takes place between the healthy and the sick. In mining districts special facilities for this intercourse exist by reason of the construction and arrangement of the colliery villages, and apart from the personal habits of the people the accommodation given to them is such as to render isolation impossible. The cottages are, as a rule, in long continuous rows, the method of water distribution is by means of "pants" placed here and there at intervals, and it is a part of the daily life which prevails for the women and children to congregate at the "pants" both from healthy and infected houses, and there to gossip. Then, again, the custom of inviting children to assemble in the house where a companion has lately died, to assist at the funeral; and on these occasions sitting, in all probability, in the same room where the death occurred, and in which in many instances other children are lying ill, tends seriously to the spread of the disease. In the large amount of visiting which goes on in the colliery villages the children generally accompany their mothers, and a special point is made of visiting where scarlatina prevails, for it is assumed that it is a disease which all must have sooner or later, and that it is better to get it over whilst one is young. In this way it has come to pass that epidemics of terrible severity are brought about at fairly regular intervals. In 1873–74, 549 scarlet fever deaths took place; in 1878–79, 445 occurred; in 1880 there were 112 deaths; and 88 deaths in 1882 seemed to indicate the commencement of another epidemic, the material alone being required in the form of susceptible children, who are periodically provided by reason of the high birth-rate. An interesting account is given of a special outbreak of enteric fever which was associated with the use of a polluted water-supply; and an incidence of small-pox in the Walker urban district shows that persons under five years of age, who are normally more susceptible than others, were when vaccinated actually the least susceptible of all; whereas, of eight persons known to be unvaccinated, no less than six were attacked. Then follows a somewhat detailed account of the needs of the whole district in the matter of hospital provision. The principles that should be held in view, both as to the amount of accommodation to be provided for joint urban and rural districts, the distances at which the hospitals should be placed from one another, and certain information as to the points that should be held in view in the construction of the buildings, are given. These points, besides being of local interest, may be usefully studied by others, having to advise over wide areas, and the whole report is one that may be regarded as typical of the method to be employed in laying before a combination of sanitary authorities information as to matters in which they have a joint interest. The report has evidently been prepared with a good deal of care, and is well illustrated by a series of large lithographs showing the best divisions of the district for hospital purposes; the comparative incidence of small-pox, scarlatina, and fever in the whole district; the arrangements of dwellings in modern colliery villages; the detailed plan of some of the houses recently erected; and the faulty conditions of the midden-privies, and the method by which these may most easily be corrected. There is a further plan explanatory of an outbreak of enteric fever at Hazelrigge. We are glad to note that the report is placed on sale at an almost nominal price.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Surbiton (*Urban*).—Dr. Coleman's report on the health condition of this urban sanitary district during 1883 estimates its population at 10,250, or 834 above the number enumerated in 1881. It is somewhat doubtful, however, bearing in mind the decline in the number of births, whether the population is not over-estimated. The birth-rate, which was 28·3 in 1878, has since steadily declined to 23·0 in 1883. The death-rate in 1883 was but 10·8 per 1000, against 14·3, 10·6, and 11·8 in the three preceding years. That the annual death-rate in this district during the seven years 1877–83 has not exceeded 12·2 per 1000, affords satisfactory evidence of the sanitary condition of its population. Too much importance, however, should not be attached to the general death-rate of a suburban district like Surbiton. The exceptionally low death-rate, taken in connexion with the low birth-rate, affords the strongest proof of the abnormal constitution of the population. The proportion of domestic servants in the Surbiton population must be unusually high, and this fact inevitably reduces both the birth-rate and death-rate. Moreover, it is necessary to take into consideration the age distribution of a population in order to estimate the value of the general death-rate as a trustworthy test of health and sanitary condition. Dr. Coleman omits in his report all reference to the ages of the decedents, which is an undoubted defect in any health report. The most satisfactory feature in the present report is the fact that only 4 deaths during the year were referred to the principal zymotic diseases, against 20, 7, and 18 in the three preceding years; these included 2 from diarrhœa, 1 from scarlet fever, and 1 from enteric fever. The ventilation of the sewers received, it is said, considerable attention and improvement during the year, but no progress had been made in the direction of providing hospital accommodation for the isolation of cases of infectious diseases, which is of vital importance in such a favourite residential neighbourhood as Surbiton.

Sherborne (*Rural*).—The medical officer of health for the rural sanitary district of Sherborne (Mr. N. E. Davies) is able to present a most satisfactory report for 1883. In a population of 6979 persons 165 births and 106 deaths were registered during the year; the birth-rate was equal to 23·6, while the death-rate did not exceed 15·2 per 1000. Only one death (a fatal case of whooping-cough) was referred to the principal zymotic diseases. The most striking feature of the return is the fact that 52 of the 106 deaths were of persons aged upwards of 60 years, including 16 aged more than 80 years. The rate of infant mortality was also satisfactorily low compared with that in other districts, although it might no doubt be further reduced. Only 12 deaths of infants under one year of age were recorded, equal to 7·3 per cent. of the births registered. Notwithstanding the generally favourable character of the statistics, the medical officer of health calls attention to the evils of overcrowding and to nuisances from piggeries in many parts of the district. The existence of houses unfit for habitation in the villages of Bishop's Down and Purse Caundle is noticed, as also the defective nature of the water-supply in some of the parishes. It is evident that the sanitary condition of the district is still susceptible of further improvement, in spite of its low death-rate.

Aylesbury (*Rural*).—Dr. Hilliard reports the mortality of this district as amounting to 17·1 per 1000 living. The district has on several occasions been the scene of outbreaks of infectious disease, and during the past year both diphtheria and so-called "croup" caused five deaths in the Aston Clinton sub-district; the disease being associated with filthy drain, ditch, and cesspool conditions, which have often been reported on. These are now, we are glad to observe, to a great extent remedied. This district has also for a long time neglected to avail itself of one of the best water-supplies which the country affords, but at last, and owing to the generosity of Lady de Rothschild, the excellent service from the Chiltern Hills has been so laid along the roads of Aston Clinton and Weston villages that it is now available for every cottage that will take it.

Bedford (*Urban*).—Bedford town had a low death-rate during 1883—namely, 14·8 per 1000. Diphtheria has for several years been very seriously prevalent in and around the borough, and hence Dr. Prior has devoted considerable time to the study of its etiology; and so far as the town is concerned, he has received every help from the medical practitioners, who have reported all the cases to him as they have arisen. Dr. Prior, whose experience now extends over a population of some 80,000 persons scattered over both urban and rural districts, is strongly convinced that diphtheria never has a so-called spontaneous origin in mere conditions of filth; and he asserts that he has never yet come upon any distinct evidence that the disease is so generated, any more than scarlatina, with which it possesses certain curious affinities. So far as Bedford town is con-

cerned, this disease appears now to be in a quiescent condition, but it caused sixteen deaths last year. Excellent sanitary work is being steadily pursued under Dr. Prior's surveillance, and, as far as it is possible, known conditions of disease are being dealt with as they are discovered.

Chester (*Urban*).—Dr. Kenyon gives the death-rate for the past year as 19·2 per 1000. He reports that under the powers conferred by the Public Health Act there has been steady progress in effecting structural alterations in the drainage of houses; that advance is being made in the conversion of the old midden-privies into waterclosets; that the sewer ventilation has been greatly improved; and that improvement is being effected in the removal of conditions calculated to affect health injuriously.

Lewes (*Urban*).—The death-rate for the entire borough was 14·9 per 1000, but it varied very much in the different divisions. Thus, in the low-lying neighbourhood known as Cliffe, it reached 22·2 per 1000. The population of this locality is, however, comparatively small, and there is some reason to believe that the apparent increase may have been mainly due to the small figures dealt with. In one sense we regret to see a reference to the construction of cesspools, although it is in the direction of making them water-tight. What Lewes needs is such a system of sewerage as would render the construction of cesspools unnecessary except in very outlying portions of the district. The water-supply remains excellent. The infectious hospital has not been used during the year, but it is maintained in readiness for use, and it stands there constituting an important feature in the sanitary defences of the borough, which may at any moment be called into requisition. Mr. Braden's record of sanitary work done during the year shows progress in all the directions where it is needed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5818 births and 3773 deaths were registered during the week ending the 19th inst. The annual death-rate in these towns, which had been equal to 22·7 and 20·4 per 1000 in the two preceding weeks, rose again to 22·5 last week. During the first three weeks of the current quarter, the death-rate in these towns averaged only 21·9 per 1000, against 23·1 and 24·6 in the corresponding periods of 1882 and 1883. The lowest rates last week were 13·1 in Derby, 14·8 in Brighton, and 16·1 in Leicester. The rates in the other towns ranged upwards to 28·4 in Leeds, 28·5 in Oldham, 28·6 in Wolverhampton, and 28·7 both in Manchester and in Bolton. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 544, showing a further increase upon recent weekly numbers; they included 189 from whooping-cough, 159 from measles, 88 from scarlet fever, 40 from "fever" (principally enteric), 37 from diarrhœa, 24 from diphtheria, and 17 from small-pox. These zymotic diseases caused the lowest death-rates last week in Hull and in Leicester, and the highest in Liverpool and in Wolverhampton. The highest death-rates from whooping-cough occurred in Bolton, London, Liverpool, and Manchester; measles in Wolverhampton, Portsmouth, and Nottingham; scarlet fever in Sheffield, Preston, Cardiff, and Leeds; and "fever" in Bradford. Of the 24 deaths from diphtheria in the twenty-eight towns, 18 occurred in London. Small-pox caused 11 deaths in London, 2 both in Liverpool and in Newcastle-upon-Tyne, and 1 both in Wolverhampton and in Sheffield. The number of small-pox patients in the metropolitan asylum hospitals and hospital ships, which had rapidly increased in the four previous weeks from 148 to 355, further rose to 405 on Saturday last; 61 new cases were admitted to these hospitals during last week, against 39 and 92 in the two preceding weeks. The Highgate Small-pox Hospital contained 17 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 357 and 285 in the two previous weeks, rose again to 318 last week, but were 99 below the corrected weekly average. The causes of 106, or 2·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths occurred in Halifax, Oldham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had steadily increased from 20·9 to 25·2 in the five preceding weeks, declined again to 23·3 in the week ending the 19th inst.; this rate was, however, 1·9 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 14·8 and 15·1 in Leith and Perth, to 25·2 in Glasgow and 38·3 in Perth. The deaths in the eight towns included 96 which were referred to the principal zymotic diseases, against 101 and 103 in the two preceding weeks; 29 resulted from whooping-cough, 16 from diphtheria, 16 from measles, 15 from diarrhœal diseases, 12 from scarlet fever, 7 from "fever," and one from small-pox. The rate from these diseases averaged 4·0 per 1000 in the Scotch towns, and slightly exceeded the rate from the same diseases in the large English towns. The 29 deaths from whooping-cough in the eight Scotch towns showed a considerable decline from recent weekly numbers, and included 15 in Glasgow and 6 in Edinburgh. The 16 deaths referred to diphtheria exceeded the number in either of the two previous weeks; 5 occurred in Aberdeen, 4 in Glasgow, and 4 in Greenock. Of the 16 fatal cases of measles, 5 were returned both in Edinburgh and in Paisley. Seven of the 12 deaths from scarlet fever, and 4 of the 7 from "fever," were returned in Glasgow. The fatal case of small-pox occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 112 and 128 in the two previous weeks, declined to 109 last week, and were 24 below the number returned in the corresponding week of last year. The causes of 89, or more than 15 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 29·6 and 23·0 per 1000 in the two preceding weeks, rose again to 28·7 in the week ending the 19th instant. During the first three weeks of the current quarter the death-rate in the city averaged 27·7 per 1000, whereas it did not exceed 20·8 in London and 22·5 in Edinburgh during the same period. The 193 deaths in Dublin last week showed an increase of 38 upon the number in the previous week, and included 19 which were referred to the principal zymotic diseases, against 20 and 10 in the two previous weeks; 8 resulted from "fever" (typhus, enteric, or simple), 6 from scarlet fever, 2 from diphtheria, 2 from diarrhœa, 1 from whooping-cough, and not one either from small-pox or measles. These 19 deaths were equal to an annual rate of 2·8 per 1000, the rate from the same diseases being 4·1 in London and 3·8 in Edinburgh. The 8 deaths from "fever" exceeded those in the previous week by one; the deaths from this cause averaged 8 in the first three weeks of this quarter, against but 5 in the thirteen weeks of the first quarter in the year. The 6 fatal cases of scarlet fever also showed an increase; and the 2 of diphtheria were the first recorded since the middle of March. Four of the deaths resulted from violence, and 60 were recorded in public institutions. The 64 deaths of persons aged over sixty years exceeded the number in the previous week of this year. The causes of 25, or nearly 13 per cent., of the deaths registered during the week were not certified.

PRESTON MORTALITY.

Among the largest English towns Manchester, Liverpool, and Preston are pre-eminent for their excessive rates of mortality, and contribute in great measure to the high death-rate that prevails in Lancashire. The rate in Liverpool, although comparing favourably with the rates that formerly prevailed in that city, has been remarkably stationary during the last four years. In Manchester the rate has steadily increased during the last three years, notwithstanding the general decline in English urban mortality. As regards Preston, it was only added to the list of large towns dealt with in the Registrar-General's weekly return at the beginning of 1882, since which the high rate of mortality that has so long prevailed in that town has attracted more general attention. In 1882 the general death-rate in Preston was higher than in any other town in the Registrar-

General's list, being equal to 27·6 per 1000; last year the death-rate in this town, 25·5, was only, among the twenty-eight towns, exceeded in Liverpool and Manchester, in which cities the rate was equal to 26·7 and 27·6 per 1000 respectively. The mean zymotic death-rate in Preston was 4·89 per 1000 during 1882–3, against 3·23, the average rate in the twenty-eight towns, and exceeded the recorded zymotic rate in any other of these towns. Infant mortality, moreover, was equal to 209 per 1000 births in the two years, the nearest approach to so high a rate in any of the other twenty-eight towns being 191 in Leicester. It is satisfactory to know that such unerring indications of insanitary condition are attracting local attention. Alderman Hibbert has recently published the result of a laborious and painstaking "Investigation of the Death-rate of Preston," which, if of a somewhat negative character, should prepare the way for further investigations. It is, at any rate, clearly proved that Professor Jevons' theory of the controlling influence of the proportion of Irish in a population upon its death-rate will not explain the excess of mortality in Preston. Mr. Hibbert attaches, however, considerable importance to the relatively large proportion of female labour in factories, a proportion large both in actual number and also large in proportion of males to females. It is impossible to doubt that Mr. Hibbert is fully justified in his enunciation of the evil effects of the employment of child-bearing women in factories, evil effects which neither begin nor end with excessive infant mortality. It is clear, however, that only a part, and probably a small part, of the excess of mortality in Preston, compared with that in other manufacturing towns, can be safely attributed to its abnormal proportion of female labour in factories. The sanitary authority of Preston will, it is hoped, be as ready as Mr. Hibbert to admit that much of the excess of zymotic fatality, and also of the general mortality, may be due to want of light and air among the back-to-back houses, to defective and ill-ventilated sewers, to insufficient control of the house property owner and tenement farmer, and to general and special deficiencies of sanitary organisation. When this conviction comes home to the sanitary authority, together with the earnest intention of improving the sanitary condition of the town, there will then be a certainty of reducing the death-rate at all ages, as well as of infants. In the meantime it would be useful to have the recent vital statistics of the town scientifically differentiated. It is essential to know the death-rate among the Preston population, for males and females separately, and for different groups of ages. It may be desirable to point out that because the Preston population contains a larger proportion of elderly persons than such towns as St. Helens, Middlesbrough, Cardiff, and Barrow-in-Furness, Mr. Hibbert is mistaken in supposing that the duration of life is longer or the probability of living is better in Preston than in those towns. The proportion of old people in such towns as Middlesbrough and Barrow-in-Furness is relatively small, because the population is more largely made up of immigrant adults. There can be no doubt that the duration of life, if properly calculated, would be far greater either in Middlesbrough and Barrow-in-Furness than in Preston. Death-rates at groups of ages are, however, necessary to make such a calculation possible.

THE SERVICES.

INDIAN MEDICAL DEPARTMENT.—Brigade Surgeon G. M. Slaughter, A.M.D., to officiate with temporary rank as Deputy Surgeon-General, Oudh Division and Rohilkund District, vice Deputy Surgeon-General Guthrie, M.D., transferred to the Home establishment; Assistant-Surgeon Sakharam Arjoon, to act as Superintendent of Vaccination, Presidency Circle, Bombay, in addition to his own duties as Professor of Botany, Grant Medical College; Surgeon-Major Keelan, to be Civil Surgeon of Hyderabad; Surgeon M. L. Bartholomeusz, to be Civil Surgeon of Sukkur.

Surgeon H. K. Fuller, B.M.Camb., M.R.C.S., to act as Professor of Physical Science, Presidency College, Madras, Fourth Grade, during the absence of Dr. Wilson on leave, or until further orders.

ADMIRALTY.—The following appointments have been made:—Deputy Inspectors-General of Hospitals and Fleets: George Mason, to Chatham Division of Royal Marines, vice Gordon Jackson; Francis William Davis, to Bermuda Hospital, vice George Mason; Belgrave Ninnis, to Chatham Division Royal Marines (temporary); Gordon Jackson, to Haslar Hospital, vice Francis W. Davis. Staff-Surgeons—Valentine Duke, to the *Duncan*, additional for temporary service, vice Surgeon John W. Davis; Thomas Canning Hickey, to the *Swiftsure*, additional for Esquimalt sick quarters, vice Christopher Harvey; Henry V. Ellis, to be Surgeon and Agent at Rhosale, vice Davies.

Correspondence.

"Audi alteram partem."

THE CONTAGION OF CHOLERA.

To the Editor of THE LANCET.

SIR,—With your remarks on the etiology and pathology of cholera, contained in your issue of February 16th last, I most cordially agree. It is nothing less than a public scandal that medical officers whose views happen to differ from those of Dr. Caningham, the sanitary commissioner with the Government of India, should be subjected to the official despotism of this gentleman. Not only is all individual research discouraged, not only is all evidence pointing indisputably to the conveyance of cholera directly or indirectly by human intercourse pooh-poohed, but we have at the present moment the highly gratifying spectacle, to us as Englishmen, of the etiology of cholera elucidated by our distinguished German visitors, after a few weeks' work on the very spot on which a highly salaried officer, especially appointed by Government for sanitary purposes, has for years contented himself with enunciating doctrines totally opposed to all medical logic. And as the result of this we see that there has been no appreciable reduction in the average rate of mortality amongst the troops. It is time that the Indian medical service should repudiate the peculiar views held by the sanitary commissioner with the Government of India. I would suggest indeed that our Government request Germany to lend us Dr. Koch for some considerable period of time to set our house in order.

I am, Sir, your obedient servant,

ANDREW DUNCAN, M.D., B.S. Lond., F.R.C.S.,
Officiating in medical charge, 15th Bengal Cavalry.

Rawal Pindi, March 26th, 1884.

SCARLET FEVER AND DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—The question whether there be any relationship between scarlet fever and diphtheria is one of great interest, and forces itself upon the consideration of the profession every now and then, as some startling fact is recorded of the one disease having been distinctly traced to the infection of the other. I am myself very sceptical about this relationship, and the following incident which has just occurred in my practice has caused me to question whether we are sufficiently certain of our diagnosis proper from some cases of scarlet fever anginosa to enable us to separate the two diseases where both are epidemic at the same time and place.

I was called to T. C——, a farm labourer, aged eighteen, suffering from severe sore-throat, and found him in bed very prostrate and feverish, and on examination the throat was seen to be very inflamed and presenting on the left tonsil a dirty grey patch about the size of a shilling, which looked exactly like a patch of diphtheritic membrane. There was no rash, but when I visited him the next day a distinct scarlet fever rash pervaded the thorax and upper part of the abdomen, and this had spread the following day over the whole body. The case now ran the usual course of scarlet fever anginosa. The diphtheritic patch disappeared on the third day, and no fresh one formed. There had been no history of rigor, but the lad had complained of general malaise for a week prior to my seeing him. No history of direct infection either from diphtheria or scarlet fever could be traced, but both diseases had been prevalent up to this time in the village where the lad worked. The patient recovered under the action of solution of perchloride of iron and the judicious use of stimulants.

D. C——, the father of the above lad, and the only person

save the mother who had been in his room, complained of sore-throat a fortnight after I first saw the lad. A brown diphtheritic-looking patch was visible on the right tonsil, but the fauces were not so inflamed as the son's had been. No rash appeared, and the urine was free from albumen. The throat rapidly recovered under the effects of solution of perchloride of iron. I certainly thought I had a case of diphtheria to deal with in the lad until the rash appeared, and the man's case seemed clearly to be one of diphtheria, and had not the boy been suffering from scarlet fever I should have concluded it was a case of diphtheria; but I incline to the belief that it was a case of diphtheritic sore-throat of scarlet fever which was arrested in its development by the fact that the man had suffered from scarlet fever some years ago.

The fact that the scarlet fever in these cases assumed the diphtheritic type may be due to the bad sanitary conditions of the surroundings of the patients, a stagnant pool of filth being within a few yards of the house and emitting a very strong and offensive odour, especially during the few hot days which prevailed during the incubation period of the lad's illness. Were I inclined to accept the relationship between scarlet fever and diphtheria I should no doubt have diagnosed the father's case as one of true diphtheria, and reported it in your valuable pages as fresh evidence of this relationship. I am, Sir, yours obediently,

Coggeshall, Essex. W. T. JACKMAN, M.R.C.S., &c.

AN UNUSUAL CASE.

To the Editor of THE LANCET.

SIR,—The following remarkable case has recently come under my notice, and after hunting through medical literature I cannot find its fellow:—

A delicate-looking man, aged twenty-seven, had gonorrhœa twelve months ago, for which he was treated by a friendly chemist's assistant. In course of time a bubo appeared in the right groin, for which he was obliged to call in medical aid, and the bubo was opened. Then came stricture, and afterwards what he called "rheumatic" pains in the lumbar region, for which troubles he sought relief at the hydropathic establishment at Matlock, whence he returned on March 28th. I then saw him for the first time, and found these symptoms: emaciation, pain and great stiffness extending from the knees to the lumbar region; pulse 120; temperature 103°; constipation; urine coming in drops; some purulent discharge from penis; lungs and heart healthy; no spinal disease. I sent him to bed, and by degrees the pulse and temperature were reduced to nearly their normal character; but on April 2nd he complained of pain over the right buttock, which I examined, and found swollen and fluctuating. On April 5th I was told he had had diarrhœa all night, and upon examining the stools I found them to consist entirely of pus. I then examined the buttock, and found the swelling less, and gurgling upon pressure, which further diminished the size of the swelling and gave him pain. Immediately after this manipulation he had a discharge of pus per anum. At this date, April 15th, pus still comes away, though in smaller quantities, and I find the left buttock also tender, with the same phenomenon of gurgling upon pressure. Throughout the case there have been no rigors, but the breath has that sweetish odour peculiar to cases of pyæmia.

I am, Sir, your obedient servant,

April 14th, 1884. PUZZLED.

BIRMINGHAM.

(From our own Correspondent.)

ALLEGATIONS AGAINST THE PAROCHIAL MEDICAL OFFICERS.

THE Local Government Board inquiry into the charges made against the district medical officers with regard to the pauper lunatic returns came to an end on the 14th inst. The report, which will be the outcome of a fortnight's protracted inquiry, is looked forward to with interest, and will doubtless lead to some modification in the way of dealing with the returns in future. The defence, or rather refutation, made by one of the officers is remarkable for its vigour and clearness, contrasting in no disparaging manner with that of the trained legal defenders engaged in the case. One of the medical officers, who had held the appointment for a period of twenty-seven years, died during the inquiry after an illness of some months' duration. It is a matter of regret to think that his last days were harassed by the thought of the investigation going on, and that he had not an opportunity of clearing himself of the entanglement which an irregular and loose system permitted in reference to the duties he had discharged so long.

ANATOMY AT OWENS COLLEGE.

The Council of Owens College have postponed for a month the appointment of a professor of anatomy in accordance with the report adopted as to the teaching of this branch of the medical curriculum. No one conversant with the duties as previously discharged will venture to say that the work has not been well done, but the growing desire to concentrate the teaching in the hands of one person not otherwise engaged in practice is considered to offer advantages which will compensate, in the college interests at least, for depriving some industrious and hard-working professional men of a source of emolument which, in these days of competition, will be difficult to make up in other ways. The success which has lately attended the students of this school at the college examinations in anatomy is a proof of the zeal and efforts of the teaching staff; and though the principle involved in the change is the outcome of progressive reform actuated by right motives, the proof of incompetence or inefficiency must not be held a part of the desire for change. Advocates with assured positions can afford to be disinterested and to disintegrate and remodel systems, but should be careful to estimate the value of vested interests, not as a phrase, but as a reality affecting the individual as well as the institution.

A FIELD FOR LADY HELPS.

At a meeting of ladies held in the Council House on the 21st inst., in furtherance of the proposal to arrange for collecting tables to be stationed in several parts of the town on Hospital Saturday, a committee was formed to carry out the objects of the promoters. The Mayor pointed out that a great deal of voluntary assistance was rendered by ladies in London, and he expressed a hope that similar results would be obtained in this town. The necessary arrangements as to details were discussed and cordially endorsed by those present. Thus there is opened an opportunity for work in a direction which cannot but be twice blessed when carried out in the spirit of philanthropy and self-denial which brought about so laudable a meeting of the gentler sex.

MIDLAND ODONTOLOGICAL SOCIETY.

The first ordinary meeting of the members of this Society was held at the Medical Institute on the 3rd inst. The President, Mr. T. Howkins, congratulated the Society upon the present position of dental surgery, and upon the legislative changes by which its influence had become recognised. A paper by Mr. R. Owen was read upon "The Degeneracy of Dental Tissue, and the Dietary Influence of Silicated Phosphates." A discussion followed, and a number of dental specimens were exhibited.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

TYNE PORT SANITARY AUTHORITY

SOME idea of the work involved in looking after the sanitary condition of vessels arriving in the Tyne was given at the ordinary meeting of the board yesterday, when it was stated that during the months of February and March the following had been visited: British steamers 963, British sailing vessels 704, foreign steamers 232, foreign sailing vessels 181. Including small craft, altogether 2162 inspections had been made. Of these sixty-three were found in an insanitary condition in their crew spaces, holds, closets, &c. It is, however, satisfactory to note that when notices were given to remedy these defects, they were, with one exception, satisfactorily complied with. The foreign steamers were often overcrowded with emigrants, and the accommodation defective. It was pointed out, however, in reference to the overcrowding, that vessels under foreign flags, as long as they did not cause any nuisance to the British public, could not be interfered with.

THE LIDDELL DISPENSARY AT JARROW.

The formal opening of the Dispensary at Jarrow, erected to commemorate the work done in Jarrow by the Rev. Canon Liddell, the late rector, took place last week in the presence of a very large assembly. I gave you in a previous letter the description of the laying of the foundation stone, and a plan of the building. The institution is to partake of the provident character, and is to be partly managed by Jarrow artisans, who appear to take a great interest in it, as a well-arranged procession of the trades took place at the opening, and a very successful concert in aid of the building fund formed part of the day's proceedings.

ALLEGED DEATH THROUGH SCHOOL CRAMMING.

At the meeting of the Skelton (Cleveland) School Board, held on Friday last, a parent appeared before the Board, and complained of the severity of the home-lessons given in the girls' school, and stated that his daughter, aged ten years and seven months, had died on Thursday from congestion of the brain, which he attributed to over-pressure. The most severe lesson he said was "spelling." He produced a book which showed that eighty-nine words were given for one evening's work, and seventy, eighty, and ninety were frequently given in addition to other work—arithmetic, &c. The child did not suffer from any previous disease, was not robust, and was rather nervous. He further stated to the Board that "he knew one child that had 136 words of spelling given it to learn." Assuming this parent is correct as to his facts, the case, although I fear only a typical one, is very significant. At this board meeting some of the members admitted that the over-pressure on the children previous to the examination was very severe. Of course, it is the abuse of competition and the payments by results that are, as "a hard-and-fast" system, to blame.

NEWCASTLE NURSES' HOME AND TRAINING SCHOOL.

This valuable institution, which has been doing a large amount of work for some years, and has proved of the greatest value to patients and practitioners in this district, has just issued its annual report, by which it is shown that, although it commenced its last year's work with a debt of nearly £200, it has closed it with a balance in favour of the Home. The nurses have earned the sum of £1058, which is the largest one placed to their credit in any one year since its establishment, thirteen years ago; and so constantly have the nurses been employed that it has rarely happened that more than two nurses have been in the Home at one time. The Home has removed to more suitable premises in a central and respectable portion of the city. The success of an institution of this nature, and indeed its usefulness, must in a great measure depend upon the matron, and in this particular the committee have been fortunate in obtaining a lady who has had great experience in hospital administration, and who is, in addition, a trained nurse. Our Mayor (who is himself a medical man) spoke highly at the annual meeting lately of the usefulness and excellent arrangements of the institution.

MINERS AND MEDICAL MEN.

The secretary of the Durham Miners' Association, in his monthly circular just issued, makes some very strong remarks on the subject of unqualified assistants, which cannot fail to have an influence on the question. He says:—"You should not only protest but positively refuse having these unqualified men pitched amongst you. A qualified man is put down as 'the colliery doctor,' and men are supposed to subscribe to him, and, as he cannot possibly attend himself he appoints an assistant, who is sometimes not qualified as a medical man; he has not taken a diploma, and is therefore not licensed to practise. Whether your doctor be principal or assistant, insist that he be of your own choice, and a qualified medical practitioner."

Newcastle, April 22nd.

GLASGOW.

(From our own Correspondent.)

THE LORD RECTORSHIP.

In November last the students of Glasgow University elected Mr. Fawcett, the Postmaster-General, as their Lord Rector. At that time the political opponents of Mr. Fawcett in the University lodged a protest against his election on the ground that he is disqualified by the fact of his being a professor at Cambridge University. This protest has now been withdrawn.

GLASGOW DISPENSARY FOR SKIN DISEASES.

The annual report of this institution indicates that it continues to perform its work efficiently and economically. Since its foundation, in the year 1861, 27,073 patients have been treated. During the past year there were 1208 new cases. Financially the charity is in a satisfactory and improving condition.

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR.

The annual report of this hospital states that during the year ended 828 cases had been under treatment. Feeling reference is made to the loss sustained by the institution in the retirement and subsequent death of Dr. J. P. Cassells.

HEALTH OF GLASGOW.

The Glasgow death-rate during the past fortnight was 27·4 per 1000. Small-pox is not yet stamped out, but appears to be subsiding somewhat, there having been twenty-one cases registered, as against twenty-four in the preceding fortnight. Of four patients who died of it three were unvaccinated. The sanitary authorities make complaint that cases of small-pox are sometimes not reported to them. The medical officer goes on to state in his report that the number of cases of fever registered was fifty-four in place of forty—viz., twenty-eight of enteric fever, twenty-four of typhus, and two undefined. One-half of the total number of cases of typhus represents the entire membership of a family of twelve, living in a house of three apartments—one of the saddest illustrations I have seen of degeneracy through drink from respectability to dirt, starvation, and disease.

WATER-SUPPLY.

Glasgow authorities are taking measures for obtaining an increased water-supply. The total available supply from all sources is at present forty-two million gallons a day. The actual consumption in the year 1883 was on the average 38,900,000 gallons a day, which, at the present yearly increase of about a million gallons a day, would not last more than three years. It is proposed in the first place to introduce waste-water meters over part or the whole of the present area of supply, and, in the second place, to look for some additional source of supply, probably the vicinity of Loch Katrine.

The Faculty Lecturer for this year is Professor D. J. Hamilton, of Aberdeen, who gives three lectures on the Structure and Functions of the Brain in relation to Disease.

Small-pox has broken out on board the *Cumberland* training ship in the Firth of Clyde. Four of the boys have been attacked.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS.

On the 6th prox., pursuant to the provisions of the Supplemental Charter, the council will elect fourteen examiners for the ensuing year, to examine for the licence, for the fellowship, for the diploma in midwifery, and in general education. This will be the first occasion under the recent bye-law by which these elections will for the future be held—that is to say, instead of as heretofore, the election taking place by seven members drawn by ballot from among the twenty-one which constitute the council, now all the members present will be entitled to vote, and the voting will be open. Whether this arrangement will have any effect in altering the present composition of the board of examiners, it would be premature to determine; but many of the Fellows believe that some new blood infused into that body would be an improvement, and consider that, because an examiner is once elected, that is no reason why he should be expected to have a vested interest in his office, only terminable at his death.

ANCIENT IRISH MEDICAL MANUSCRIPTS.

A resolution has been unanimously adopted by the Council of the Royal College of Surgeons in Ireland requesting the Royal Irish Academy to translate those of the Irish

manuscripts in their possession bearing on medical matters, out of the grant of £400 which they annually receive from Government. The manuscripts are some 400 in number, and doubtless will be of considerable interest when published.

THE RICHMOND HOSPITAL, DUBLIN.

A deputation of the governors and medical staff of this institution had an interview with his Excellency Earl Spencer on last Monday, for the purpose of bringing under his notice the present condition of the hospital. It was shown that the Richmond Surgical Hospital is at present unfit for surgical operations, being dilapidated and unsuitable in every respect, sanitary and otherwise, for the purpose for which a hospital is required. As the institution is totally supported by Government, and the board of management nominated by the Irish executive, the deputation impressed on his Excellency the imperative necessity of laying out a sum of money (estimated at £12,000) without delay in such alterations as are called for. Earl Spencer, in his reply, admitted that the matter was one of great importance, but he did not think it desirable that the annual grant should be increased. The Treasury regarded the grant as a final one, and declined in 1870 to assist or do anything towards the building of the hospital. He thought they were unlikely to alter their mind in this respect, but suggested that if the position of the governors were altered so as to be a more independent body, which might be done by commutation of the allowance or some other arrangement, there might be an improvement in the position of the hospital. It is quite evident from this that the governors cannot calculate upon gaining the assistance of the Government in altering or rebuilding the hospital, and that funds must be obtained from some other source.

DR. DILLON AND THE LOCAL GOVERNMENT BOARD.

Dr. Dillon was on three occasions elected medical officer to the Listowel Workhouse, but on each occasion the sanction of the Local Government Board was refused to the appointment for the reason that the outgoing officer had received a sum of money from Dr. Dillon for resigning in his favour. As the guardians persisted in re-electing Dr. Dillon, he was dismissed by a sealed order of the Board on the 21st February last; and last week, in the Court of Queen's Bench, his counsel applied for a writ of *certiorari* to bring up to be quashed this order removing him from office. It was argued that the power of removing an officer by the Local Government Board was discretionary, and also that there could not be a clearer case for exercising the discretion than where an office had been purchased. Such an act was an offence at common law, and it would be a serious thing were it to go forth that the Board of Guardians, in spite of remonstrance, could defy the Board. The application was refused.

THE PROPOSED CONJOINT SCHEME OF THE COLLEGES OF PHYSICIANS AND SURGEONS.

The proposed Conjoint Scheme of Examination between these Colleges appears now to be in a hopeless condition. The College of Surgeons agreed to abandon their proposal to hold a conjoint examination with the Apothecaries' Hall, but desired to retain the right of examining apothecaries already on the register for a diploma in surgery. The College of Physicians, however, are antagonistic to this compromise, and hence the dead-lock which has taken place. It must be admitted that there were very few who were at all sanguine as to the result of the proposed scheme, and I shall not be surprised if no more is heard of the matter.

SANITARY CONGRESS.

The Sanitary Institute will hold their annual meeting this year in Dublin, and the 30th September is the date fixed for the opening of the exhibition. Dr. Grimshaw will act as President of the Section of Sanitary Science and Preventive Medicine; and Dr. Cameron will hold a similar position in that of Chemistry, Meteorology, and Geology.

At a special meeting of the Derry Corporation held last week, a resolution was adopted that the Corporation scheme for providing the city with a large additional supply of water should at once be proceeded with. A loan of £20,000 has been obtained for the construction of the works.

Dublin, April 22nd.

A BUILDING costing about £20,000 was opened on the 21st inst. at Folkestone as a convalescent home.

VICTORIA HOSPITAL, SUEZ.

(*From a Correspondent.*)

THE troops have all passed up from Suakim, with the exception of the 3rd battalion 60th Rifles. The regiments from India, which were stopped on their way home, have now proceeded in Her Majesty's ship *Jumna*, and those belonging to Egypt are back once more in their old quarters. Since the Victoria Hospital was opened by the arrival of the first batch of wounded men on the 9th March, 19 officers and 431 non-commissioned officers and men have passed through its wards, the greater part of whom have been furnished from the expeditionary force, though the ordinary sick have constituted a certain number from the detachment at Suez. The actual number of wounded may be taken as 241; the rest as sick whose cases may be generalised as sunstroke, dysentery, diarrhœa, and a few cases of enteric fever. There have been six deaths in all. Most of the cases at present are progressing towards recovery, but a certain number will have to be invalided. The cases of secondary hæmorrhage have given rise to much anxiety, occurring generally in the second and third week after the injury. In each case the wound or operation had occurred before admission, and the wound was in an unhealthy condition, thus producing degeneration of the coats of the vessel and hæmorrhage. In all the cases, five in number, the attempt to reach the bleeding point was attended by failure, owing to the unhealthy condition of the parts, and the hæmorrhage in each case was so severe as to immediately threaten life; to save which the femoral artery was tied in three cases, the external iliac in one and the common carotid in one. All the operations were successful in themselves and for the purpose for which they were undertaken, but one man died subsequently from the shock through loss of blood. All surgeons will admit the trying nature of these cases, occurring as they so often do at night, when, with only night assistance about him, the surgeon is instantly obliged to face a delicate operation to save the life of his patient. The hospital has served a most useful purpose in affording a convenient and comfortable place for all the sick and wounded of the campaign, and that it did so from the soldier's point of view is proved by the statements which reach us that the men when passed on wish themselves back again. The sun is getting extremely powerful, the thermometer reaching 95° F. in the house, but the nights keep cool and pleasant. The peculiarity of the climate consists in the north wind, which is always cool and agreeable, and when it blows makes one forget the lassitude and fatigue occasioned by the previous days of heat—a strong contrast to the hot and unrefreshing evenings and nights of India at this season.

Suez, April 13th, 1884.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary meeting of the Royal College of Physicians was held on Thursday last, the 24th inst., Sir Wm. Jenner, Bart., President, in the chair.

The examiners for the Murchison Scholarship submitted their report, which stated that fifteen candidates had competed. On the recommendation of the examiners, the scholarship was awarded to Mr. John Bland Sutton, of the Middlesex Hospital.

Upon the question of the appointment of Vice-Presidents, the College resolved that the President should be empowered to appoint annually, from among the Fellows who had held the office of senior censor, two Vice-Presidents, who should not be re-eligible for the office until after the lapse of five years.

On the recommendation of the Finance Committee, an additional honorarium of £50 was voted to each of the present censors.

It was resolved, for the second time, that the election of Fellows take place this year on the last Thursday in May. It was also resolved that the College should have a banquet during the present year, in accordance with the testament of Harvey.

A report from the Medical Bill Committee respecting the desirability of affording increased facilities to English medical students for obtaining the degree of M.D. was read, and referred for further consideration

MEDICAL NOTES IN PARLIAMENT.

PARLIAMENT reassembled on Monday, after the Easter recess. In the House of Commons, on the motion of Dr. Cameron, the name of Dr. Farquharson was added to the list of members of the Select Committee on the Commissariat and Transport Services (Egyptian campaign).

On Tuesday, in reply to Mr. Meldon, Mr. Trevelyan said there was no rule which required Dr. Cameron, the executive sanitary officer of the City of Dublin, to give the whole of his time to the duties of his office, and his attendance was not necessary at two inquiries recently held by officers of the Local Government Board.

On Thursday, in reply to Mr. Leighton, Mr. Mundella stated the circumstances of the prosecution of a man named Abbot by the Bedford School Board for not sending his son to school. It was true that the defendant produced to the magistrate a medical certificate that the boy ought not to be sent to school more than half the day, but he did not forward that certificate to the School Board, and, moreover, he kept the boy away from school altogether, and employed him until late at night in selling newspapers in the streets; therefore he (Mr. Mundella) thought the School Board fully justified in their action.

Obituary.

J. HALL DAVIS, M.D., F.R.C.P.

DR. J. HALL DAVIS was born in Sheffield in 1811. He was the second son of Dr. D. D. Davis, who was one of the ablest and most distinguished obstetric physicians of this century, and who practised in Sheffield as a physician from 1803 to 1813, whence he removed to London and began to lecture on midwifery. He was appointed to the chair of midwifery at the London University when that College was opened, and subsequently he became physician-accoucheur to the Duchess of Kent. The late Dr. Hall Davis was educated at St. Paul's School; he subsequently studied medicine at University College and at Heidelberg, and in 1837 became a Member of the Royal College of Surgeons. He continued his studies, however, and in 1839 acted as clinical clerk to Dr. Elliotson at University College Hospital. He graduated in the University of London, taking his M.B. degree in 1842, and that of M.D. in 1845. Soon after the death of his father, in 1841, Dr. Davis became a private lecturer on midwifery, and opened a class at Russell-place, where he lectured for several years. These lectures were recognised by the examining boards. At this time (1842) he was appointed physician to the Royal Maternity Charity, succeeding his father, who had acted in a similar capacity since 1816. Upon his resignation in 1882, Dr. Davis was made consulting physician to the charity. He became M.R.C.P. in 1851, and F.R.C.P. in 1863. At the latter date he was appointed lecturer on midwifery at the Middlesex School of Medicine, and obstetric physician to the hospital. The duties of these posts he continued to discharge until within a short time of his death. Dr. Davis was an original Fellow of the Obstetrical Society, and presided over its meetings from 1867 to 1869. He was the author of the well-known work, "Parturition and its Difficulties," as well as of a large number of papers on obstetric subjects. He had a large midwifery and consulting obstetric practice, and enjoyed the trust and confidence of the profession. As an accoucheur, Dr. Davis was possessed of great skill, calmness, self-possession, and sound judgment. Difficulties brought out his sterling qualities and displayed the abundance of his resources. As a diagnostician, he was possessed of special skill, and his opinion on abdominal tumours of obscure character was highly esteemed by his colleagues. As a gynæcologist, he did not belong to the advanced school, but rather to that more sober party towards which the best among the rising generation tend. To his juniors he was always courteous, generous, and absolutely free from jealousy; we know of instances in which his encouragement and recommendation have been of signal service. As a man, he was of a retiring disposition, but kind, genial, and wise, upright in character, and esteemed most by those who knew him best.

HENRY DEWES BEST, M.R.C.S., L.S.A., J.P

THIS gentleman, whose death on April 6th we announced on the 12th inst., had been for some time suffering from heart disease, and also from slight attacks of gout. On March 26th Dr. Totherick was called in, but his best advice could not stay the progress of the disease, and the patient grew rapidly worse. On Sunday, the 6th inst., Dr. Wade, of Birmingham, held a consultation with Dr. Totherick, but the consultation was of little avail, and Mr. Best died in his chair shortly after midnight. Mr. Best received his medical education at Sydenham College, Birmingham, and at St. Bartholomew's Hospital. By his many patients he was beloved as a true friend, not only for his general attention, but for his kindness of heart and unselfish devotion to duty. The deceased had been in practice over thirty years in Bilston, succeeding uncle, grandfather, and father, who have, as a professional family, either as clergymen or medical men, occupied a prominent position in Bilston for over 150 years. Mr. Best took no great part in politics or the transaction of public affairs, and, although a county magistrate, seldom sat on the bench.

His remains were interred in the family vault in St. Leonard's Churchyard, Bilston, on the 10th inst. The funeral, which was of a semi-public character, was attended by several of his brother magistrates and many of the leading members of the local medical profession.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Andrews, Alexander Gordon, L.R.C.P. Lond., Coleshill-street.
Bateson, John Francis, M.B. Edin., Wavertree, Liverpool.
Brown, Osmond Percy, L.S.A., Percy-circus.
Birt, Thomas, L.S.A., Stourbridge.
Davies, Stevewright Arthur, L.R.C.P. Lond., Llanelly.
Dent, Herbert Crowley, L.S.A., Woolwich.
Evers, Charles John, L.S.A., Stourbridge.
Fuller, Arthur, M.B. Edin., Cape Town.
Hardie, Robert, M.B. Durham, Newcastle-on-Tyne.
Hunter, Robert Rankin, M.B. Glasgow, Glasgow.
James, Henry Daniel, L.S.A., Babbicombe.
Marsden, Herbert Harrison, L.K.Q.C.P.I., Birkenhead.
Miller, William Francis, M.D., Melbourne.
Owen, William Hall, L.K.Q.C.P.I., Liverpool.
Plowman, Sidney, L.S.A., St. Thomas's Hospital.
Satchell, Charles George, L.S.A., Tunbridge Wells.
Starr, William Henderson, L.S.A., West Kensington-park.

Admitted Members of the College on Tuesday last:—

Anglin, William, M.D., Kingston, Ontario.
Coe, Henry C., M.D. Harvard Univ., Detroit.
Corkhill, Joseph, G. G., L.R.C.P. Edin., Bootle.
Fall, Edwin Armstrong, L.R.C.P. Edin., Kensington-gardens-square.
Gemmel, Archibald B., L.R.C.P. Edin., Glasgow.
Hale, George Ernest, L.R.C.P. Edin., Elgin-road.
Harris, John Henry, L.S.A., Aberystwyth.
Hepworth, Arthur, M.B. Durham, Newcastle-on-Tyne.
Lilly, A. T. Irvine, L.R.C.P. Lond., Southampton.
McVittie, John W., L.R.C.P. Edin., Liverpool.
Nunn, John Robert, L.S.A., Burton-on-Trent.
Turner, George, L.R.C.P. Edin., Manchester.

Admitted Members of the College on Wednesday last:—

Anderson, G. E. Caldwell, Cape Colony.
Barrett, Gilbert Lacy, Todmorden.
Bateman, Llewellyn Jones, Birmingham.
Braddon, William Leonard, Upton-on-Severn.
Dixon, J. R. Lucas, L.R.C.P. Edin., Liverpool.
Edwards, William Rice, Caerleon.
Forster, Thomas Frederick, L.S.A., Brampton.
French, G. W. Henry, Hornsey.
Gordon, Frederick William, Dublin.
Gough, John Harley, Manchester.
Hugill, George Frederick, L.S.A., Chislehurst.
Morris, E. G. Freeman, Bromyard.
Pearson, Heslop Laird, Rock Ferry.
Pettifer, Edmund Cleaver, Stoke Newington-green.
Shaw, William Ormerod, Basingstoke.
Thomas, David, Aberffraw.
Tomkins, Harding Henbest, Bristol.
Tupholme, John Thomson, L.R.C.P. Edin., South Kensington.
Wells, George Lee, Leeds.
Winton, Alfred de, Gloucester.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 17th inst.:—

J. S. W. Chitty, Charing-cross Hospital; C. C. Burt, Westminster Hospital; S. B. Cook and A. W. Pearse, St. Thomas's Hospital; N. R. Howse and W. D. Calvert, London Hospital; W. P. May and A. J. Lang, University College; A. J. Macnab and R. J. Stephens, King's College; S. A. Tidey, St. Mary's Hospital; F. F. Burghard and George Black, Guy's Hospital; P. J. de Nyssen, St. George's Hospital.

Of the 256 candidates examined during the past fortnight, 45 failed to satisfy the Board of Examiners, and were referred for three, and 3 candidates for six, months' further anatomical and physiological study.

[In last week's list of candidates who passed the Primary Examination the name of Herbert V. Rake (Guy's Hospital) was inadvertently omitted.]

COLLEGE OF PHYSICIANS IN IRELAND.—At the April examinations the following candidates obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Thomas George Drake, George Albert Dreaper, Michael Edward Keating, Richard Murphy, William Edmund O'Connor, Joseph Arthur Purdon, John Robinson, Frederick J. W. Stoney.

MIDWIFERY.—Thomas George Drake, George Albert Dreaper, Michael Edward Keating, John E. McCraith, Richard Murphy, Joseph Arthur Purdon, Frederick J. W. Stoney.

The undermentioned Member was elected a Fellow:—

William J. Smyly.

At the same meeting the following gentlemen were elected to the Honorary Fellowship of the College:—

Henry W. Acland, C.B., President of the General Medical Council.
Thomas Crawford, Director-General of the Army Medical Department.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on April 17th:—

Anderson, James Johnstone, Vine-street, Lincoln.
Birt, Thomas, High-street, Stourbridge.
Brown, Osmond Percy, Percy-circus, Pentonville.
Harrison, Joseph, Willford-street, Bradford.
Hewer, Henry John, Highbury New Park.
Kirkhouse, George, Romilly-road, Finsbury-park.
Musgrave, Frank Ernest, Leopold-street, Leeds.
Scott, Alfred Langston, Thornton-hill, Wimbledon.
Tatam, Edwin Charles, Wetherby, Yorkshire.
Woodson, Adolphus Arthur, Fitzalan-square, Sheffield.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Albert Ernest Foster, Leeds School of Medicine; Harman Visger, Bristol School of Medicine.

[In the list published last week of candidates who passed the Preliminary Examination in Arts, the name of John Terry should have had an asterisk affixed to it.]

VACCINATION GRANT.—Dr. G. A. Hicks, public vaccinator to the Bushey and Aldenham district, Watford Union, has been awarded the Government grant for efficient vaccination (third time.)

AT an inquest held at Dorking on the 12th inst., on the body of Mr. Henry Fitzsimons, York, who died from an overdose of chloral, taken to produce sleep, the jury returned a verdict of "Death from misadventure."

SOCIAL SCIENCE ASSOCIATION. — The Standing Committee on Health met on Tuesday, Sir Richard Temple, Bart., in the chair, when the provisions of the Dwelling Houses Inspection Bill were considered. A resolution was unanimously passed, regretting that as its clauses were of such an impracticable and unjust character, the Committee were unable to give the measure their support.

PUBLIC BATHS FOR DUBLIN. — The foundation stone of the new public baths was laid last week by the Lord Mayor, and when completed these baths will supply a want long felt. The reclining baths will be ten in number, and provision will be made for a swimming-bath seventy-six feet long by forty feet wide. The cost of the baths with washhouses attached is estimated at £5000.

THE NEW HOSPITAL AT GRAVESEND.—The new hospital erected at Gravesend by the Corporation of the City of London, for the reception of patients suffering from infectious disease, was opened on the 17th inst. by the Lord Mayor. The new building has taken the place of the hospital-ship *Rhin*, which will be removed to Chatham and returned to the Admiralty, by whom it has for the last eleven years been placed at the service of the Corporation. Only infected patients arriving on boardship will be provided for, and in cases where charges can be recovered the Corporation have power to enforce their repayment at the rate of five shillings a day; in cases, however, in which it would be useless trying to obtain repayment of outlay, the Corporation will defray the expenses. Dr. Collingridge is the medical officer of the institution.

THE Secretary of State for India has been pleased to appoint Mr. David Hooper, F.C.S., analytical chemist and quinologist to the Nilgiri Government Cinchona Plantations in the Madras Presidency.

CENTENARIANS.—The deaths of two centenarians have been recently announced, one at Hammersmith, Miss Sarah Clark, whose age is given as 105, and the other, a woman named Lesson, whose death occurred at Solihull, near Birmingham, at the advanced age of 103 years.

CLINICAL SOCIETY OF LONDON. — At the meeting of this Society, to-day (Friday), the following papers will be read:—A case of Epithelioma of the Tongue, by Mr. Gant; a case of Gluteal Aneurism, by Mr. Turner; a case of Extensive Venous Thrombosis following Fracture of the Forearm, by Mr. W. Arbuthnot Lane; and a case of Fracture of the Coronoid Process with Dislocation of both Bones of the Forearm backwards, by Dr. Lediard.

CONVALESCENT HOMES. — A committee has recently tabulated a list of about 250 homes in different parts of the country, with many of which it is in connexion. Owing to the mildness of the winter, about 100 cases per month have been sent to the homes by the committee, more than were sent during the busiest part of last summer and autumn, at a cost of 25*s.* each. Subscriptions may be sent to Mr. C. S. Loch, the secretary of the Charity Organisation Society.

SOUTH LONDON SCHOOL OF PHARMACY. — The prizes were presented to the successful competitors on Saturday, April 19th, as under: — Senior Chemistry: Medal, F. Armstrong; Certificate, F. W. Ashton. Junior Chemistry: Medal, Thomas B. Blyton. Certificates (equal), F. W. Taylor and W. Holme. Botany: Medal, F. W. Taylor; Certificate, G. D. Cooper. Materia Medica: Medal, R. M. Stewart; Certificate T. J. Clarke. Practical Pharmacy and Dispensing: Medal, T. A. Moss; Certificate, R. M. Stewart. Extra Certificates: Messrs. Atherton, Buxton, French, Hall, and Norfolk.

ROYAL FREE HOSPITAL. — The fifty-sixth anniversary festival dinner in connexion with this institution was held on the 23rd inst. From the statement it appears that during the past year the receipts from all sources amounted to £10,959 13*s.* 2*d.* The number of in-patients admitted during the year was 1772, being the largest number ever received, and the out-patients amounted to 21,142. It is gratifying to learn that the institution is practically free from debt. In the course of the evening it was announced that donations and subscriptions had been given in the room to the amount of about £1600.

BEQUESTS.—The late Mr. William Wood has, by his will, left the following legacies to the institutions specified, which he has directed shall be paid free of duty within four months after his decease:—Liverpool Royal Infirmary, 250 guineas; Liverpool Northern Hospital, 150 guineas; Liverpool Royal Southern Hospital, 150 guineas; Liverpool Dispensaries, 150 guineas; Liverpool Infirmary for Children, 150 guineas; Liverpool Eye and Ear Infirmary, 150 guineas; Southport Convalescent Hospital, 100 guineas; Harrogate Bath Hospital, 100 guineas. The legacy to the Harrogate Bath Hospital is to be added to the building fund and applied in the construction of new or additional buildings, but the other legacies are to be applied as the committees of the several institutions may decide.

LEICESTER INFIRMARY.—The annual meeting of the governors and subscribers to this institution was held on the 16th inst. The financial report was satisfactory, although there has been a slight falling off in the number of annual subscribers. The Hospital Sunday collections amounted to £1512 and the Saturday collection to £1716, showing an increase in the latter of £113. Owing to a decrease in the number of patients, the house expenditure during the past year was £777 less than in 1882. The only item in the receipts which showed a serious reduction in

1883 was that of legacies, which were smaller than they had been for ten years. But for this decrease, there would have been a balance to the good, instead of, as at present, a small balance due to the treasurer.

NORFOLK AND NORWICH HOSPITAL.—The anniversary general meeting of the governors of this institution was held on the 12th inst. In consequence of the illness of the secretary and one of the auditors the Board of Management were unable to produce the annual report and statement, and the meeting was adjourned for a month to allow the report to be prepared. A lengthy discussion took place in reference to a report of a special committee on the question of making the hospital free or amending the regulations relative to recommendations, and the report was ultimately referred to the Board of Management and medical staff. The resolution passed at the last special meeting, requiring the payment of not less than a shilling for each sick certificate issued on behalf of a member of a friendly society, who was a patient in the hospital, was rescinded by a unanimous vote, and the proceedings terminated.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of directors of this Society was held on Wednesday, April 9th, at 8 P.M., Sir James Paget, Bart., President, in the chair. A letter was read from Sir George Burrows, late president, in answer to a resolution passed at the last court on his resignation of the presidentship. The death of a widow receiving £50 per annum was reported. There were no fresh applications for relief. Four new members were elected, the deaths of two were announced, and the resignation of another. The half-yearly applications from the widows and orphans on the funds were read, and it was resolved that a sum of £1162 be granted at the next court to fifty-seven widows, five orphans, and three recipients from the Copeland fund. It was also resolved that Mr. James T. Ware and Sir Erasmus Wilson be nominated Vice Presidents in the place of Sir James Paget (elected President), and Mr. Charles Hawkins, resigned; and that Dr. Kempster, Mr. Stanford Felce, Mr. Brodhurst, Mr. Lowne, Jun., Dr. Herbert Davies, and Dr. Russell Reynolds be nominated directors in the place of the six senior directors, who retire. Tuesday, the 13th of May, was fixed for the annual general meeting, at 5 P.M.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BADST, C. T. UVO, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Howden District of the Auckland Union.

BARLING, GILBERT, M.B., F.R.C.S., has been appointed Honorary Assistant-Surgeon to the Birmingham Orthopædic and Spinal Hospital.

BARRS, A. G., M.D.Edin., M.R.C.P.Lond., has been appointed an Assistant-Physician to the Leeds General Infirmary.

CLARKE, WILLIAM BRUCE, M.A., M.B.Oxon., F.R.C.S.Eng., has been elected a Surgeon to the West London Hospital, vice Alfred Cooper, F.R.C.S.Eng., resigned.

HAWKINS, FRANCIS H., M.B., has been appointed Resident Physician to the Royal Infirmary of Edinburgh.

HEISCH, Mr., has been reappointed Public Analyst for the Borough of Hampstead.

HODSON, FRANCIS OCTAVIUS, L.K.Q.C.P.I., L.M.K.Q.C.P.I., has been appointed Government Medical Officer and Public Vaccinator for the Hillston District, and Medical Officer to the Hospital, Hillston, New South Wales.

JACOB, ERNEST H., M.A., M.D.Oxon., has been appointed an Assistant-Physician to the Leeds General Infirmary.

LANE, THOMAS, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Government Medical Officer and Vaccinator for the District of Warialda, New South Wales

LLOYD, RICKARD WILLIAM, M.R.C.S., has been elected an Administrator of Anæsthetics at the West London Hospital.

LUCKMAN, EDW. LLEWELLYN, L.R.C.P., M.R.C.S., has been appointed Surgeon to the Altrincham Hospital and Dispensary, vice Jones, resigned.

MACAULAY, S., M.D.Q.U.I., has been appointed Medical Officer and Public Vaccinator to the Sixth District of the Maidstone Union, vice J. W. Bury, M.R.C.S., resigned.

MACKENZIE, JOHN HUGH, F.R.C.S.Ed., has been appointed Surgeon to the Temora Hospital, New South Wales.

MALCOLM, JOHN D., M.B., C.M., has been appointed Surgeon to the Out-patient Department of the Samaritan Free Hospital, vice Mr. Skene Keith, resigned.

MATTHEWS, ARTHUR, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Cleaton District of the Whitehaven Union.

PRITCHARD, SAMUEL EVAN, L.R.C.P.L., M.R.C.S., has been appointed Medical Officer for the First District of St. George-in-the-East Union.

SANDFORD, HORACE CHARLES, L.R.C.P.Ed., M.R.C.S., has been appointed Government Medical Officer for the District of Forbes, New South Wales.

SHIRTLIFF, EDW. MATTHEW, M.R.C.S., L.S.A.Lond., has been re-appointed Medical Officer for the Ham District of the Kingston Union.

SUTTON, HENRY MARTYN, M.R.C.S., L.R.C.P., L.S.A.Lond., has been appointed Junior Resident Medical Officer to the Great Northern Central Hospital.

VEALE, HENRY, M.D., has been appointed Physician to the Essex and Colchester General Hospital, vice A. Wallace, M.D., resigned.

WEISS, HUBERT FOVEAUX, F.R.C.S.Eng., has been elected an Assistant-Surgeon to the West London Hospital, vice William Bruce Clarke, M.A., M.B.Oxon., F.R.C.S.Eng.

Births, Marriages, and Deaths.

BIRTHS.

BATTERBURY.—On the 21st inst., at Wimborne Minster, the wife of Geo. H. Batterbury, M.D.Lond., of a son.

MACKENZIE.—On the 16th inst., at Finsbury-square, E.C., the wife of Stephen Mackenzie, M.D., F.R.C.P., of a son.

PRINGLE.—On the 16th inst., at Angelton, Bridgend, South Wales, the wife of H. T. Pringle, M.D., Medical Superintendent of the Glamorgan County Asylum, of a son.

PURVES.—On the 17th inst., at Stratford-place, W., the wife of W. Laidlaw Purves, M.D., of a daughter.

SCANES-SPICER.—On the 10th inst., the wife of R. H. Scanes-Spicer, M.B., B.Sc.Lond., Medical Superintendent of the Fulham Infirmary, of a daughter.

MARRIAGES.

BALKWILL—ANDERTON.—On the 9th inst., at the Congregational Church, Cleckheaton, by the Rev. W. E. Anderton, M.A. (brother of the bride), assisted by the Rev. T. Nicholson and the Rev. W. Jansen Davies, William Edward Balkwill, M.R.C.S.E., of 9, Old Cavendish-street, Cavendish-square, London, to Edith, only daughter of William Anderton, of Elm-bank, Cleckheaton, Yorkshire, J.P. At home May 1st and 2nd.

BOURNE—ALLEN.—On the 16th inst., at Emmanuel Church, Weston-super-Mare, Edmund Kemp Bourne, L.R.C.P.Ed., L.R.C.S.Ed., of East Peckham, Kent, to Josephine Grace, daughter of the late Joseph Roscoe Allen, of Lentworth Hall, near Lancaster.

CHAPMAN—ALEXANDER.—On the 17th inst., at St. Matthias' Church, Richmond, Surrey, Herbert Frederick Chapman, L.R.C.P.Lond., M.R.C.S., eldest son of Frederick Chapman, Surgeon, of Richmond, to Bethea Emma, only daughter of the late William Stuart Alexander, the Younger, Lieut. R.A.

IRVING—JONES.—On the 22nd inst., at Ramsden-street Congregational Chapel, Huddersfield, John Irving, M.B., of Huddersfield, to Annie Elizabeth, youngest daughter of C. H. Jones, of Huddersfield.

MEIGHAN—YUILLE.—On the 15th inst., at 1, Morris-place, Monteith-row, Glasgow, by the Rev. F. L. Robertson, D.D., Minister of St. Andrew's Parish, assisted by the Rev. John Orr, Minister of the Tron Parish, Thomas Spence Meighan, M.D., to Agnes, second daughter of William Yuille.

MORRIS—BAGG.—On the 9th inst., at St. James's Church, Brighton, John Morris, M.R.C.S., to Selina Mary Ann, daughter of the late William Bagg, Esq.

MULLER—TATUM.—On the 27th ult., at Montreal, Canada, Frederick Muller, M.D., to Laura, youngest daughter of the late T. Tatum, M.R.C.S., of George-street, Hanover-square, London.

STRICKLAND—HINCHLIFFE.—On the 16th inst., at St. John-in-the-Wilderness, Cragg Vale, Edmund Strickland, M.R.C.S. &c., of Halifax, to Helen, only daughter of Hinchliffe Hinchliffe, Esq., of Cragg Hall.

WILKIE—JERMYN.—On the 25th ult., at Bareilly, N.W.P., Surgeon David Wilkie, Indian Medical Service, to Ella, second daughter of the Bishop of Brechin.

DEATHS.

BECHER.—On the 14th inst., at Stuttgard, Emil Becher, M.D., Brigade Surgeon, aged 55.

FIELD.—On the 21st inst., at the Manor House, Southall, Octavius A. Field, F.R.C.S., late of Sussex-gardens, Hyde-park, aged 72.

FREEBORN.—On the 20th inst., at Oxford, Richard Fernandez Freeborn, M.D., F.R.C.P., M.R.C.S., aged 60.

HARWOOD.—On the 6th February, at Sydney, New South Wales, Eliza, relict of the late Thomas Soutter Harwood, aged 78.

REYNOLDS.—On the 9th inst., at Denmark-road, Lowestoft, John Swatman Reynolds, L.R.C.P. &c., second son of the late Rev. John Collett Reynolds, of Holton, Suffolk, in his 35th year.

STONEHAM.—On the 16th inst., at his residence, Ilfracombe, Philip Stoneham, M.R.C.S., aged 76.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 24th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 18	30·02	N.E.	40	36	90	47	36	..	Cloudy
,, 19	29·86	N.E.	40	35	79	47	35	..	Cloudy
,, 20	29·91	E.	46	39	69	47	34	..	Cloudy
,, 21	29·97	N.E.	45	40	90	50	36	..	Hazy
,, 22	30·05	N.E.	43	33	84	51	33	..	Cloudy
,, 23	30·00	E.	43	38	85	51	33	..	Hazy
,, 24	29·90	E.	42	38	76	43	32	..	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE PAUCITY IN NUMBER OF MEDICAL MEN IN RUSSIA.

THAT the Russian death-rate is the highest in Europe is attributed to the paucity of medical men in that country, combined with the habits of the rural population. Excepting the two capitals, where there are many German physicians, it is stated that there is no district in the empire sufficiently supplied with doctors. According to the latest returns, the average duration of life in Russia is only twenty-six years; of infants more than 60 per cent. die before they reach their fifth year; of 8,000,000, only 3,770,000 attain the age of military service—i.e., their twenty-fifth year, and of these at least 1,000,000 are found, by reason of shortness of stature and weakness of body, unfit for military duties.

ATROPHY OF MAMMARY GLANDS.

To the Editor of THE LANCET.

SIR,—I shall be glad if any of the readers of THE LANCET can offer any suggestion likely to prove serviceable in the following case.

C. F. H——, a young lady aged twenty-four years, applied to me for advice under the following circumstances:—About four months back she noticed that her mammary glands were rapidly diminishing in size, and at the present time they have the appearance of those seen in an aged female, being almost completely atrophied. She was up to about four months back remarkably well developed, and is now, with the exception of the atrophy of the mammary glands, in perfect health, her menstrual and other functions being normally carried on. She has been married two years, and twelve months after her marriage gave birth to a living child, which died however from bronchitis when a few weeks old. I am at a loss to account for her ailment, and may mention that Mrs. H——'s family history is good, and that she is suffering from no organic disease. If any of your readers can suggest a remedy they would greatly oblige.

I am, Sir, yours faithfully,

April 21st, 1884. A PERPLEXED PRACTITIONER.

"INCONTINENCE OF URINE."

To the Editor of THE LANCET.

SIR,—If your correspondent, "M.," will try five drops of tincture of cantharides three times a day he will be rewarded with the cure of his patient. This drug acted, as it were, carminatively for me with a child eleven years old, and in an obstinate case of a boy fourteen years of age. It renders the neck of the bladder sensitive, and the urine stimulus keeps the sphincter vesicæ tonically closed till voluntarily overcome at micturition time. In children want of tonic contraction in the sphincter, and not excessive sensitiveness and spasmodic effort in the body of the bladder, is the most frequent cause of nocturnal incontinence of urine.

I am, Sir, yours truly,

Mount Clarence, Kingstown, April 21st, 1884. JOHN ROCHE, M.D.

VENTILATION OF HOSPITALS.

Query.—It is undoubtedly advisable in the abstract to destroy by fire or other means all contagious particles which may be generated in a hospital or elsewhere. The conveyance of infection through the open air is more a matter of inference than of proof. Recent investigations tend to show that infection is readily conveyed by means of water, sewage and sewage-gas, or by the air in ill-ventilated and overcrowded apartments; but well-authenticated instances of infection being blown from one house to the opposite one across a street in the absence of any direct intercourse or a community of water-supply, milk-supply, or direct communication by sewer-pipes, can scarcely be said to exist. In the case of epidemic influenza, the open air is the probable channel of infection; but this is a very rare disease, and it is now more than thirty years since this country was visited by an epidemic. In ordinary hospitals infectious cases, properly so-called, are not admitted, and it does not seem to us necessary to go to any great expense in devising special means for destroying organic matter in the air which escapes. When an open fireplace is used as the chief outlet for air, a good deal of destruction of organic matter must occur. Long ranges of special flues for the escape of foul air from hospitals are not without danger in themselves, because such flues get fouled with organic matter; and if a back draught occurs at any time, the ward may be flooded with contagious matter. Any such flues should be provided with flames at their bottom ends as well as at their summits, so that disease particles may be destroyed before entering the flue. In fever and small-pox hospitals it would seem to be advisable to burn all the air that escapes, but in such cases the windows must never be opened, and means must be provided to ensure that no air ever escapes by the door, which is hardly possible. To go to any great expense for the purpose of burning a part only of the escaping air, and at the same time to send infective matter into the sewers, and to allow the ingress and egress of visitors, would be to "strain at a gnat and swallow a camel."

A. T.—Probably the best thing to do is to give the gentleman in question "rope enough." Such a game as he is playing is likely to bring him into serious positions before long.

Dr. Hughes Bennett.—Soon.

MEDICAL DEGREES.

To the Editor of THE LANCET.

SIR,—I most cordially agree with the proposal of Dr. Hickman, which he brought forward at the late meeting of the Fellows and Members of the College. There is one thing which occurs to me, and which goes far to show the feeling of many of the Members of the College who have not a M.D. degree, and who are in practice and have arrived at middle age—viz., their great desire to obtain this degree, often more as a satisfaction to their patients, since the public seem to require this. The consequence is that one of the British universities is deluged with applicants to be admitted to examination, and rather than wait years for this distinction, many middle aged and even elderly practitioners of good standing go over to Brussels, and pass the examination for the degree of M.D. of that university.

I have conversed with several gentlemen holding the diplomas of the Colleges of Surgeons and of Physicians, who one and all say, "I will take care my son does not follow in my footsteps, so far as education is concerned, but will send him to one of the northern universities, where the examination is certainly not more difficult than at the two colleges, and where also the cost of taking out a degree is less. He will then be a full-blown M.D., and will have no further need for enforced study after being in practice some years (unless he chooses to go in for honours), and his patients will be perfectly satisfied, as he will be able to append M.D. after his name."

I remain, Sir, your obedient servant,

April 23rd, 1884. M.D. (Brux.), M.R.C.S. Eng., &c.

To the Editor of THE LANCET.

SIR,—May I suggest that the passing of the new Medical Bill would afford a suitable occasion for some of our universities to offer a degree, by examination but without residence, to practitioners of ten years' standing, when it is likely to be of some use to them. Under the present regulations but few candidates present themselves, and younger men are driven to obtain what they require abroad.

I am, Sir, your obedient servant,

April 22nd, 1884. K. T. L.

Dr. Manson.—We intend very shortly to publish an article on the subject of our correspondent's letter.

Mr. C. A. Ballance.—Yes.

FUND FOR THE LATE DR. WILSON, OF YOXFORD.

To the Editor of THE LANCET.

SIR,—I beg to thank you for your kindness in inserting my appeal on behalf of the widow and daughter of the late Dr. Wilson, Yoxford, and have much pleasure in acknowledging the following subscriptions:—F. Vacher, Esq., £2 2s.; Anonymous, 5s. I had hoped my appeal in such a necessitous and deserving case would have met with a more general response, and I shall be very glad to receive any further subscriptions.

Believe me, Sir, yours truly,

The Chantry, Saxmundham, April 19th, 1884. H. A. COLLINS.

LIGHTNING STROKES IN FRANCE.

M. COCHERY, the French Minister of Posts and Telegraphs, has presented to the French Academy of Sciences a report on the lightning strokes in France during the last half of 1883. The report gives the date, hour, and locality of the stroke, together with the number of persons or animals killed, and the nature of the damage and surroundings. During the month of July there were no less than 143 strokes, resulting in 13 deaths; in August, 9 strokes, with 6 deaths; in September, 14 strokes, with 4 deaths; in October, 1 stroke; and in November and December there are no strokes recorded. A survey of the two reports for the year 1883, which have been submitted by M. Cochery, leads to the conclusion that lightning strokes are, in general, more common during the beginning of the year than the end of it, and that they preponderate enormously during the summer months, especially June and July. The accidents have mostly occurred to persons who occupied a position near a tree, a chimney, or a house on an elevated site with trees around it; but there are cases of death in an open field and on a roadway. Several of the accidents have also been associated with the use of umbrellas. Several animals were killed by lightning strokes, of whose deaths no account is taken in this note.

Haut Mal.—Dr. Gowers on Epilepsy and other Chronic Convulsive Disorders.

FEES FOR MEDICAL EVIDENCE IN COURTS OF LAW.

To the Editor of THE LANCET.

SIR,—I beg to call your attention to the circumstances of a case that has recently been before two magistrates at the County Police Court, Manchester

On the 1st of January, owing to a brawl that had recently taken place, I was waited on by a wounded man, requesting my attendance at the police court to give professional evidence on his behalf. This I declined to accede to, stating that if the magistrates required my services they would send me word in the usual form. In the course of a few hours the police served me with a summons, ordering my attendance at the police court (a distance of five miles from my residence) on Jan. 4th. I obeyed the summons, and attended the court. Owing to a cross summons, the case was adjourned to the 8th of January. Instructed by the police, I again attended the court, and again gave my professional evidence. The case being concluded, I applied for my fee of two guineas on account of the two separate attendances. To my astonishment the magistrates refused to pay it, stating that they had no power in the matter. Furthermore, they said that if I wanted my fee I must apply to the man who had been wounded, and in whose favour I had given my evidence. Needless to say I declined to do anything of the kind, explaining that I had refused to attend the court on the man's account, but when served with the police summons I considered that it was compulsory for me to obey it. Furthermore, I asked them how it was that if they could compel me to attend court they had no power to grant me a fee. As I could get neither fee nor satisfaction I left the court.

I have since laid the whole circumstance before the notice of the Home Secretary, who, after the expenditure of a large amount of paper, politely informs me that he cannot interfere in the matter. I shall be glad to know what protection a man has against such procedure. If he declines to obey the summons, everyone knows the consequence; on the other hand, a witness in a Crown prosecution cannot refuse to be sworn. As the law stands we have no protection in such a case. Magistrates seem to be able to summons a medical man to court at their discretion, and inform him that they have no power to pay his fee. Cannot the Parliamentary Committee of the profession use their influence in getting it so amended that medical men are not exposed to such acts of injustice as we are at present liable to?

I am, Sir, yours truly,
CHARLES E. SMITH, L.R.C.P.I., &c.

Stretford, near Manchester, April 8th, 1884.

*** We sincerely sympathise with our correspondent in his misfortune, although we can hold out little hope of relief whilst the rules regulating the remuneration of medical men for services rendered in courts of law remain in their present unsatisfactory condition. Having allowed himself to become possessed of the knowledge of certain facts of the case, he was bound by his subpœna to appear and give evidence. It is generally admitted that, whereas it is compulsory on a doctor to testify to facts, he can withhold his opinion at his discretion. This is all very well in the abstract, but in practice the case is quite different, since it is difficult and occasionally impossible to dissociate the two. There ought to be some guarantee that a reasonable sum is secured to a medical man for giving skilled evidence in criminal cases. The magistrates, in default of the public prosecutor, should have the power to include the fee in the certificate of costs.—ED. L.

"CONSULTING-ROOM DIAL."

To the Editor of THE LANCET.

SIR,—In answer to Dr. W. H. Cheetham, I have a consulting-room dial which was bought at Stockley's, New Bond-street, W. Messrs. Waterlow and Son, London-wall, E.C., also supply similar dials.

I am, Sir, yours, &c.,
FRANCIS J. ALLAN, M.D.

April 22rd, 1884.

ADVERTISEMENT BY PORTRAIT.

Vigilans.—The conduct of the practitioner who sends his portrait to chemists as a kind of advertisement must be both despised and condemned. It is not likely that respectable chemists will be parties to such a miserable piece of vanity.

Dr. Steven (Clifton).—There are three examinations: the first is in anatomy and physiology; the second in pathology (external and internal) and midwifery; the third is in clinical work, materia medica and therapeutics. The fees are—for the first examination, 100 fr.; for the second, 110 fr.; for the third, 210 fr.

Neurosis.—We know of no separate summer course of lectures on diseases of the nervous system. Perhaps our correspondent had better attend the practice of the National Hospital for the Paralysed and Epileptic, Queen-square.

ON THE IMPORTANCE OF IMMOBILISATION IN THE TREATMENT OF FRACTURES OF THE LONG BONES COMPLICATED WITH INSENSIBILITY.

To the Editor of THE LANCET.

SIR,—My object in recording my views (the results of a sad personal experience) on the above subject is mainly for the purpose of warning inexperienced surgeons of the bad results likely to follow the malpraxis of failing to treat fractures of the long bones by complete immobilisation when complicated by insensibility of the patient.

In the early part of February, 1883, I was travelling in South Africa in a two-wheeled dogcart with two horses, and when about fifty miles from Pietermaritzburg the pole broke close to the body of the carriage, and, in consequence, I was thrown out. I sustained an oblique fracture of the tibia and fibula in the lower third of the leg, also a compound comminuted fracture of the right parietal bone, but which fracture was caused by the wheels and which by the horses' feet I cannot say. I was rendered insensible immediately, and remained so for more than three weeks. My leg was treated with some primitive wooden splints, which afforded inadequate support to the broken bones, and miserably failed to prevent me seriously damaging my leg during the state of unconsciousness.

On the twenty-third day I became partially sensible; on the day following I became violent, continuing so, on and off, for ten days, during which time the splints required to be removed and reapplied five or six times. About six weeks after the accident I was taken by easy stages to Durban, and came to England, where I was examined by Mr. Jordan Lloyd, of Birmingham, who pronounced me to be suffering from an ununited fracture of the leg.

After about two months' further treatment by immobilisation in plaster-of-Paris, it united with an inch of shortening. There is now very impaired use of the limb, and considerable pain on moderate walking. As regards the injury to the cranium, there was no depression of bone at the seat of fracture; but there was in all probability some extravasation into the brain, causing modified hemiplegia. The symptoms were a partial loss of sensation in the right arm and leg, with a certain amount of aphasia and amnesia, also total loss of smell and impairment of taste.

Since the accident I have lost all recollection of starting on the journey, neither do I remember any event that occurred on the day of the accident. I trust that in England such surgical treatment as I received does not exist, and I hope that colonial surgeons will profit by this record of experience, for if my leg had only been fixed in some immovable apparatus, as plaster-of-Paris or starch case, I might probably have recovered with a useful limb and little or no shortening, instead of being, as I fear I must regard myself, more or less of a cripple for life.

I am, Sir, yours, &c.,
H. S. REYNOLDS, F.R.C.S. Ed.

April, 1884.

W. S. M'Donald, M.B.—It is probable that on some future occasion we may deal with the question in many of its aspects. Meantime a prospectus and balance-sheet may be obtained from the secretary of any of the offices.

Mr. Adams Frost.—The statement was extracted from an American medical publication. No doubt the "25 per cent." was a misprint for 2·5 per cent.

"THE AIR TAMPON."

To the Editor of THE LANCET.

SIR,—If Messrs. Matthews really wish to impute *mala fides* to me, I am content to submit that the statement and explanation contained in my letter of the 12th inst. form a complete refutation. I repeat I had never heard of Messrs. Matthews' instrument until after the publication of my paper in 1877, when Mr. Royes Bell called my attention to it. But I must ask your permission to reply to the new claim which Messrs. Matthews now set up for their lithotomy tube. They allege that "the application of pressure, whether by air or water, is the essential principle of our tube." In support of this claim they cite the *British Medical Journal*, August 2nd, 1873. On turning to this reference I find that the bag of their lithotomy tube is directed to be "filled with ice water by means of the brass syringe." Not one word is mentioned of an alternative use of air. I am therefore compelled to say that the attempt to appropriate the name and reputation of my air tampon for their apparatus is neither ingenuous nor just.—I am, Sir, yours faithfully,

Wimpole-street, W., April 20th, 1884. G. BUCKSTON BROWNE.

*** We can insert no more letters on this subject.—ED. L.

Mr. M'Donagh.—Our correspondent has omitted the description of the method to which he refers.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Noble Smith, London; Dr. T. Barlow, London; Dr. Williams, Melbourne; Mr. G. A. D. Mackay, Greenock; Dr. Roche, Kingston; Mr. Butlin, London; Dr. Macdougall, Carlisle; Mr. Godlee, London; Mr. Welch, Blackpool; Mr. Laurence Humphry, Cambridge; Mr. J. Woodland; Dr. J. O. Will, Aberdeen; Mr. Farrington, Diss; Mr. Beaven Rake; Surgeon-Major Jazdowski, Woodburn; Surgeon-Major Stevenson, Woolwich; Dr. Latham, Cambridge; Mr. Simmonds, Tunbridge Wells; Dr. Pearse, Haslemere; Mr. Blackett, London; Dr. Abraih, Sunderland; Dr. Wahltuch, Manchester; Mr. Lefèvre, London; Mr. Collins, Saxmundham; Messrs. Bing and Son; Dr. Steven, Clifton; Dr. Norman Kerr, London; Dr. Shoemaker, Philadelphia; Mr. Buckston Browne, London; Mr. Adams Frost; Surgeon-General Cornish; Mr. Henry Morris, London; Dr. Alder Smith; Deputy Inspector-General Stewart, Dover; Dr. Penny, Bath; Mr. Maggs, Yeovil; Mr. G. R. Turner, London; Mr. Macpherson, Middlesborough; Mr. Reynolds, Castle Donnington; Mr. Kenny, Matlock; Mr. Mosse, Wiesbaden; Mr. Fitzgerald, Huddersfield; Dr. Thorowgood, London; Mrs. Markham, Portsmouth; Mr. Hopcraft, London; Mr. Silverlock, London; Mrs. Randall, Bath; Mr. Markleges; Mr. Churton, Leeds; Mr. Williams, Oxford; Messrs. Brearley and Co., Cannes; Mr. Stuart, Stratton; Messrs. Lumley and Co., London; Mr. Guilsto, Hanbury; Messrs. Wyer and Hartley, London; Mr. W. Berry; Mr. Alderton, Hammersmith; Mr. H. S. Reynolds, Derby; Dr. Watkins, Boshof; Mr. Gordon Holmes, London; Dr. Spender, Bath; Dr. Jacob, Leeds; Mr. T. S. Ellis, Gloucester; Dr. Simpson, Aberdeen; Mr. P. Harrison, London; Mr. Freeman, London; Mr. Agnew, Liverpool; Mr. Jesse, Henbury; Messrs. Lee and Martin, Birmingham; Messrs. Robinson and Scott, Edinburgh; Mr. Gell, Holt; Dr. H. Neederhauser, Basle; Rev. A. Spence, Sidney; Mr. Gibbes, London; Mr. Barron, London; Mr. Boyce, Shrewsbury; Miss Goring, Truro; Messrs. Asher and Myers, London; Dr. Hale White, London; L.R.C.P., Talegarnon; K. T. Z.; Haut Mal; Neurosis; A Perplexed Practitioner; Vigilans; L.R.C.P. Ed.; D. Q.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Kenny, Derby; Dr. Parnisch, Scanfs; Messrs. Austin and Son, Clifton; Messrs. Beal and Son, Brighton; Mr. Arrowsmith, Bristol; Mr. Gell, Holt; Dr. Corfield, Mayfair; Messrs. A. and C. Black, Edinburgh; Mr. M'Kenzie, Catains; Mr. Rowlandson, Broadstairs; Mr. Scanley, Worcester; Mr. Begg; Mr. Boyeau, Paris; Dr. M'Cartney, Punjaub; Dr. Jay, Slough; Mr. Hanks, Oxford; Mr. Holtby, Bath; Dr. Stalker, Dundee; Mr. Daunt; Mrs. M'Nay; Mr. Standish; Mr. Sells, Guildford; Miss De Luttisham, Holloway; Mr. Chubb, Turnham-green; Mr. Bakewell, London; Mr. Myers, London; Mr. Moore, Hereford; Mr. Haywood, Manchester; Dr. Pope, South Haling; Mr. Ballachey, Edgefield; Dr. Kidd, Dublin; Mr. Robson, South Shields; Mr. Lees, Reigate; Mr. Jones, Corwyn; Mr. Crosland, Bantley; Medicus, Eccles Hall; Medicus, Durham; C. H. Liverpool; A. B. C., Leeds; H. H., Huddersfield; N. W.; Medicus, Leamington; M. R., Leeds; Medicus, Barrow-in-Furness; P. Q., Southgate; Medicus, London; H. B. G.; Kappa; Alpha; C. L. F.; T. N. G., Norwich; R. H. S.; Z. X.; Medicus, Wandsworth; Forceps; Medicus, Crowland; M. E.; Alpha, Leeds; Rusticus, London; J. W., Ramsdale; &c. &c.

Richmond and Twickenham Times, Bucks Herald, Liverpool Courier, Melbourne Argus, Bendigo Independent, Retford and Gainsborough Times, Kimberley Daily Independent, Norfolk Chronicle, Burghersdorp Gazette, Bombay Gazette Summary, &c., have been received.

Medical Diary for the ensuing Week.

Monday, April 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
MEDICAL SOCIETY OF LONDON.—Dr. Cayley and Dr. Gibbes, "On a Case of Ulcerative Endocarditis, with Microscopic Specimens."—Dr. J. Kingston Fowler, "A Contribution to the Pathology of Hydro- and Pyo-salpinx."

Tuesday, April 29.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION.—3 P.M. Dr. Klein, "On Nerve and Muscle."

Wednesday, April 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

Thursday, May 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—1.30 P.M. Annual Meeting.—3 P.M. Professor Dewar, "On Flame, &c."
HARVEIAN SOCIETY.—8.30 P.M. Clinical Evening.

Friday, May 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Judd, "On Krakatoa."

Saturday, May 3.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. H. M. Westropp, "On Roman Archæology; the Forum."

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year.....	£1 12 6	Six Months.....	£0 16 3
TO CHINA AND INDIA.....		One Year	1 16 10
TO THE COLONIES AND UNITED STATES ..		Ditto	1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements..	0 4 6
Seven lines and under (each averaging ten words).	
Every additional Line	0 0 6
Front Page .. .. per Line	0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.